



**PROTEK DEVICES®**

ONLY ONE NAME MEANS PROTEKTION™

# SHORT FORM CATALOG



**TVS SOLUTIONS FOR A WORLD OF APPLICATIONS**

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## ATTENTION

- Not all voltages, configurations or packages are shown. Please contact customer service for more information.
- All devices, with the exception of those contained within the Modules-Components and Modules-SurgeBuster sections are Lead-Free, ROHS compliant. These products are designated as "lead free" and meet the requirements of the European Union's restriction on the use of hazardous substances in electrical equipment as stated in (RoHS) direction, 2002/95/EC. ProTek Devices defines "lead free" as products that are compatible with current RoHS requirements for the 6 "banned" substances: Lead (Pb, <1000ppm), Cadmium (Cd, <100ppm), Mercury (Hg, <1000ppm), Hexavalent Chromium (Cr6+, <1000ppm), Poly Brominated Biphenyls (PPB, <1000ppm), Poly Brominated Diphenyl Ethers (PBDE, <1000ppm). This includes the requirements that lead not exceed 0.1% by weight in homogeneous materials.
- The following packages are REACH Compliant: Axial Leads, DFNs, DIPs, Flip Chips, MSOPs, QFNs, SCs, SODs, SOICs, SOTs and VSIPs
- Standard Tape & Reel Nomenclature
  - -T7 for 7" Reels, i.e., PSOT05-T7
    - -T71 for 7" Reels 1,000 pieces per reel, i.e., ESD4-LFC-T71
    - -T73 for 7" Reels 3,000 pieces per reel, i.e., ESD4-LFC-T73
  - -T13 for 13" Reels, i.e., SM8LC05-T13
  - -TS for sample size Reels, i.e., SM16LC05C-TS

Not all products are available in 7" or 13" reels. Quantities per reel vary depending upon package size. Please consult the product datasheet or customer service for ordering information regarding a specific part series. All datasheets can be found on ProTek Devices website: [www.protekdevices.com](http://www.protekdevices.com)

Do not put products into life support systems without written consent from ProTek Devices.

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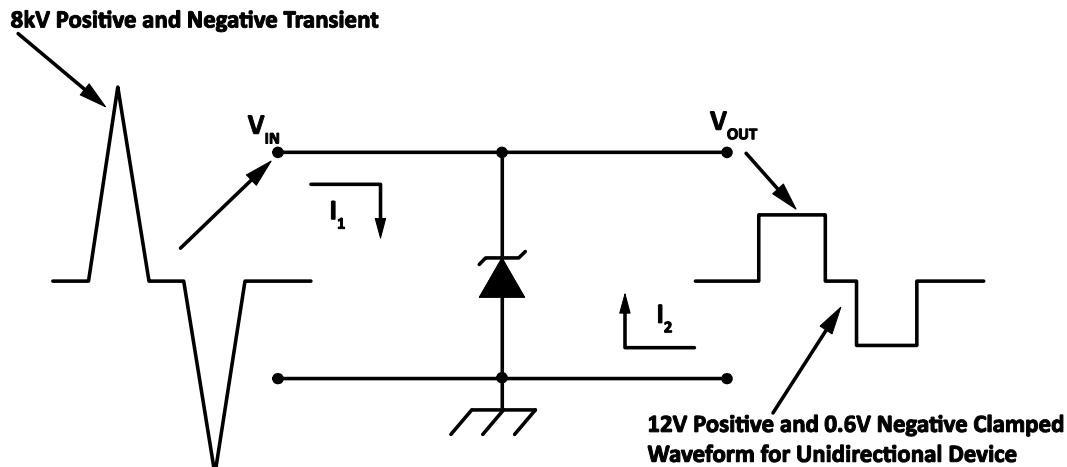
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## UNIDIRECTIONAL TVS DEVICE SELECTION PROCESS

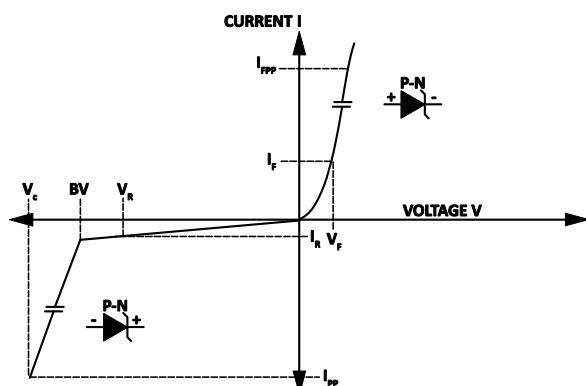
### TVS Clamping Characteristics



### Unidirectional TVS



### Avalanche Junction TVS VI Characteristics



Symbol	Parameter
$B_V$	Breakdown Voltage
$I_R$	Leakage Current
$V_R$	Reverse Stand-Off Voltage
$V_C$	Clamping Voltage
$I_{PP}$	Peak Pulse Current

### SELECTION PROCESS

#### TVS Parameters

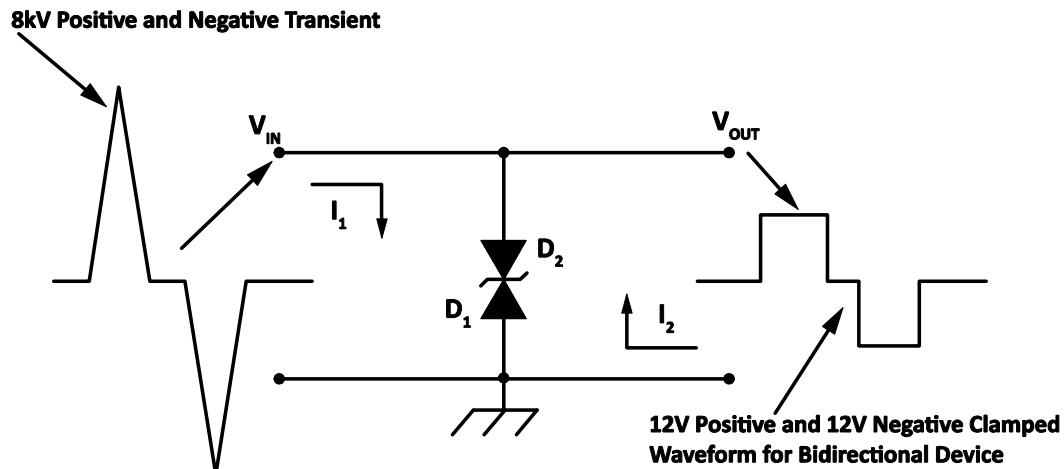
Stand-Off Voltage ( $V_R$ )  $\geq$   
 Peak Pulse Current ( $I_p$ )  $\geq$   
 Clamping Voltage ( $V_c$ )  $\leq$   
 Input Capacitance of the Device  $\leq$

#### Application Parameters

Operating Voltage ( $V_{OP}$ )  
 Transient Current ( $I_T$ )  
 Voltage Withstand Level ( $V_{WS}$ )  
 Acceptable Line Loading for Functional Pass

## BIDIRECTIONAL TVS DEVICE SELECTION PROCESS

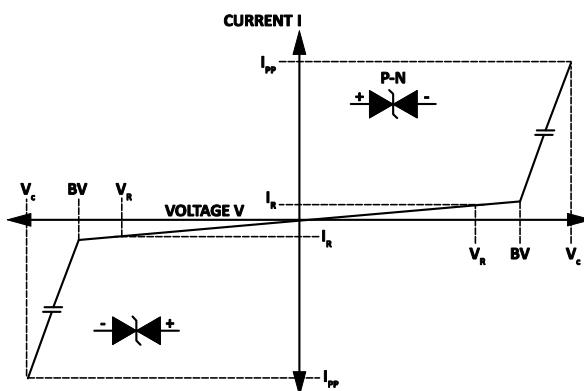
### TVS Clamping Characteristics



### Bidirectional TVS



### Avalanche Junction TVS VI Characteristics



Symbol	Parameter
$B_V$	Breakdown Voltage
$I_L$	Leakage Current
$V_R$	Reverse Stand-Off Voltage
$V_C$	Clamping Voltage
$I_{PP}$	Peak Pulse Current

### SELECTION PROCESS

#### TVS Parameters

Stand-Off Voltage ( $V_R$ )  $\geq$   
 Peak Pulse Current ( $I_p$ )  $\geq$   
 Clamping Voltage ( $V_C$ )  $\leq$   
 Input Capacitance of the Device  $\leq$

#### Application Parameters

Operating Voltage ( $V_{OP}$ )  
 Transient Current ( $I_T$ )  
 Voltage Withstand Level ( $V_{WS}$ )  
 Acceptable Line Loading for Functional Pass

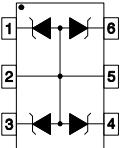
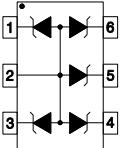
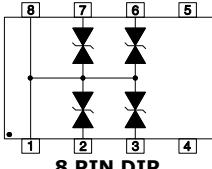
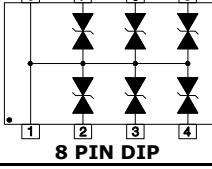
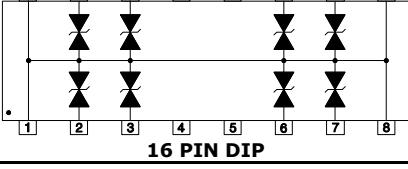
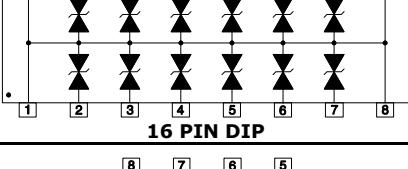
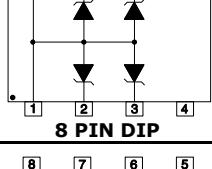
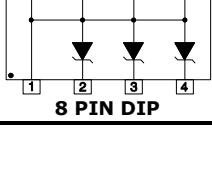
## PROTECTION DEVICE SELECTION BY APPLICATION

APPLICATION	TYPICAL INTERFACE	PREFERRED PART	OPTIONAL PART
<b>Computer Systems</b> o Desktops o Notebooks o Servers o Routers o Switches o Hubs	USB2.0	PLR0502, SR2.8	ET724, USB208
	FireWire (IEEE 1394)	GBLCxxC Series, PLC497	PLR Series
	10/100/1000 Base T Ethernet	GBLCxxC Series, SLVDA2.8LC, SLVU2.8	ET724, SRV05-4
	DVI, VGA, HDMI, Display Port	PLR0504, SRV05-4	ET721, ET724
	Audio	PKFCxxC Series, PRSB6.8C	USB004
	Modem, ADSL	PP-SM Series	PSR05, USB004
	IDE Bus, SCSI, SATA, eSATA	SMDAxxLC Series, ULC0402FC Series	PMMAD Series
	Serial Port (RS-232, RS-422)	PSOTxxC Series, SMFxxC Series	PSDxxC Series
	Parallel Port (IEEE 1284)	SM16LC Series, U0402FC Series	PMMAD Series
	Battery/Charge Connector	PSMF Series, SMFxxC Series, PSD Series, PSD05HP	PLW Series
<b>Set Top Boxes</b> o Digital Satellite Receiver o Digital Cable TV Converter o DVR o Internet TV	USB	PLR0502, PLR0504, ULC0402FC Series	USB004, USB208
	RF In/Out	PLC497, SLVU2.8, ULLC0402FC Series	GBLCxxCI Series
	Ethernet	GBLCxxC Series, SLVDA2.8LC, SLVU2.8, SLVU2.8-4, GBLCxxCI Series	ET724, SRV05-4
	Video	GBLCxxC Series, MSMF05LC, VSMF05LC, VSMF05LCC	USB004, USB208
	Audio	PSOT Series, ULC0402FC Series	USB004
	I/O Port, Smart Card RS-232, Keyboard	MSMF05LC, ULC0402FC Series	PSOTxxC Series
	Front Panel	U040xFC Series	ESD4-DFN
	XDSL	GBLCxxSeries, PP-SM Series	
<b>Mobile Devices</b> o SMART Phone o Personal Digital Assistant o Cordless Phone o Digital Camera/Camcorder o MP3 o GPS o Game Consoles o Tablets	LCD Display	ESD4-DFN, EMxD-100xx Devices	
	Keyboard	RSB6.8S, MSMF05LC & MSMF05LC VSMF05LC, VSMF05LCC	ESD4-DFN Series
	Side Buttons	VSMF05LC, VSMF05LCC, U0402FC Series	DSOT0502
	Microphone, Earphone	ULC0402FC Series	PRSB6.8S
	Memory Card	MSMF05, SRV05-4	ULC0402FC Series
	Edge Connector	ESD4-LFC, MSMF05C, SFC05-4, VSMF05LC, VSMF05LCC	ET724, USB04xx Series
	Battery/Charge Connector	PSD Series, PRSB6.8C	PLW Series
	RF Modules	GBLCxxCI Series, GBLCSC Series	ULLC0402FC Series
	USB, USB-OTG	PSR05, PLR Series	
	FireWire (IEEE 1394)	GBLCxxC Series, PLC497	PLR Series
<b>Telecom &amp; Datacom Equipment</b>	SDH/ATM/Sonet Copper Connection	PLC01-6, PLC03-3.3, SLVDA2.8LC SLVU2.8-4	GBLCxxC Series, SMLCxxC-2 Series
	10/100 Base T Ethernet	PLC01-6, PLC03-3.3, PLC03-6 PSRDA-4 Series, PSRDA-6 Series, SMDAxxLCC Series	MMAD Series, PMMAD Series, SMLCxxC-2 Series, SRV05-4
	1000 Base T Ethernet	PLC03-3.3, SLVDA2.8LC, SLVU2.8-4	DALC112S1, ET721, ET724, SRV05-4, USB208
	T1/E1, T3/E3,	PLC01-6, PLC03-3.3, PLC03-6	SMLCxxC-2 Series, USB004, PSRDA-x Series
	xDSL	GBLC Series, GBLCxxC, PP-SM Series	PUSB6B, SRV05-4, USB004
	Wireless LAN, Wireless WAN	ULLC0402FC Series, PSLC Series, SLVU2.8-x Series	
	Power Supplies	PSD Series	SM3K & SM5K Series
<b>Communication Base Station</b>	AC Power	SM3K, SM5K Series, 2700SM78CA	15KPA Series, 30KPA Series
	DC Power	SM3K, SM5K Series, 2700SM78CA	15KPA Series, 30KPA Series, 704 Series, GPZ Series
	Data Communication	GBLCxxC Series PLC01-6, PLC03-3.3, PLC03-6	SLVU2.8

**PROTECTION DEVICE SELECTION BY APPLICATION**

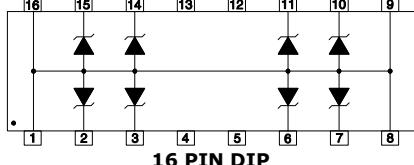
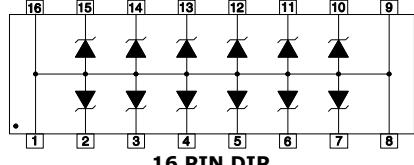
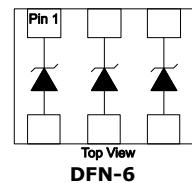
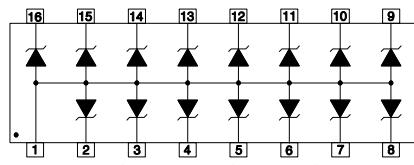
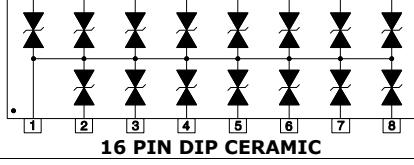
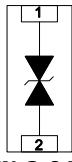
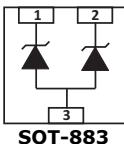
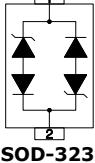
APPLICATION	TYPICAL INTERFACE	PREFERRED PART	OPTIONAL PART
<b>Aviation/Military</b>	Sensor Lines	15KPA Series, 30KPA Series	
	Control Lines	GBLCxxC Series, PLC01-6	GBLCxxI Series
	Power Supply	15KPA Series, 30KPA Series, 704 Series, GPZ Series	60/90KS Series, PHP/PIP Series
	Communication	GBLCxxC Series, DLZ Series, SMP6LCxx-2P Series	SLVU2.8-x Series
<b>Automobile (See Automotive Catalog for More information)</b>	Ignition	PAM16AL30A	PAM10ST23xxC Series
	Fuel Injection	PAM16AL30A	
	Car Stereo, GPS, Display	PAM02SD2312C PAM10ST23xxC Series	
	Instrumentation, Dashboard	PAM08SD23xxC Series, PAM10ST23xxC Series	PAM04ST430502
	Automatic Braking System	PAM10ST23xxC Series PAM10ST23xxC Series	
	Air Bag Sensor	PAM10ST23xxC Series PAM09SD2305HP	
	Automotive Checker Circuits	PAM25DF25K Series PAM07DF23K24	PAM10ST23xxC Series
	ECU – Electronic Control Unit	PAM01SC7905C	
	RKE	PAM10ST23xxC Series	
<b>Test &amp; Measurement</b>	GPIB/VXI Bus	PSRDA-4 Series, PSRDA-6 Series, SMDAxLC Series	ET721, ET724
	RS-232, RS-422	PSOTxxC Series, SMFxxC Series	SM8LC Series, PSM712
	USB2.0/1.1	PLR0502, PSR05	PLR0504
	RS-485, Ethernet (Intra-Building)	485ELC, PSM712	PLCDAxXC Series, SM8LC Series
	Sensors	PLC497, SLVU2.8	ET724, USB208
<b>Medical</b>	Display	PLR0502, PLR0504F, ULC0402FC Series	
	Touch Screen	SMF05C	
	Infusion Pump	PLR0502, PSDxxC Series, SLVU2.8, U0402FC Series	SMFxXC Series, SMS Series, SM14 Series
	Power Supply	15KPA Series, PIP Series	
	Sensors (Electrodes)	SMFxXC Series, SMS Series	ET724, USB208
	Control	GBLCxxC Series, SLVU2.8	ESD4-DFN Series
	Defibrillator	SMFxXC Series, ESD4-DFN Series	ET724, USB208
<b>Industrial Controls</b>	Wheel Chair	15KPA Series, 30KPA Series	
	AC Power Line	15KPA Series, 30KPA Series, 587BLP Series, 587BLPE Series, PHP/PIP Series	
	Control/Monitoring	232B/E, 422B/E, 485ELC	
	Sensors (Max & Low Voltage)	PLC496, DFN6-36	ULC0402FC Series
	4-20MA Control Loop	420E Series	
<b>Homeland Security</b>	Sensor/Detector	GBLCxxC Series, PLC497	SRV05-4, PSR05
	X-Ray Scanner	GBLCxxC Series	PLR Series
	Data Communication	DLZ Series	VSIP Series
	Power	15KPA Series, 30KPA Series, 704 Series, GPZ Series	PSD Series, PSOTxxC Series
<b>Point of Sale</b>	Modem	PP-SM Series	PLC03-3.3, USB208
	Card Reader, Printer	SMDAxLC Series	SM16 Series
	RS-232, RS-485	PSDxxC Series, PSOTxxC Series	PSM712
<b>Other Applications</b>			
Commercial Display	RS-232, RS-485	PSOTxxC Series, SM8LC Series	
Plotter/Printer	USB, Parallel	PUSB6B Series, USB208	PSOT Series
HDTV	Video, Buttons	GBLCxxC Series, PLR Series	USB004, USB208
Lightning Protection	Ballast	PP-SM Series	
Large Appliances	Power	PP-SM Series	
Electronic Toys	Control Keys, Charging Port	PSD Series, SFC05-4 PLW Series	ET724, USB208

**TVS DIODE ARRAYS**

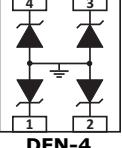
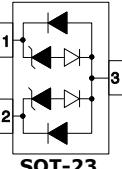
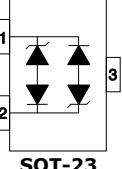
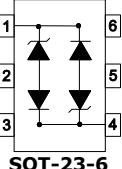
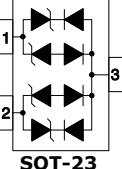
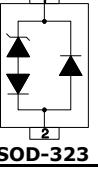
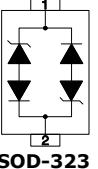
PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - μA @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	<b>PIN CONFIGURATION</b>
CP05	5.0	6.0	9.8	1.0	20	70	4	200	 <b>SOT-23-6</b>
CP05C	5.0	6.0	9.8	1.0	20	70	5	200	 <b>SOT-23-6</b>
DA12CL	12.0	13.3	32.9	34.0	2	385	4	800	 <b>8 PIN DIP</b>
DA15CL	15.0	16.7	37.7	27.0	2	300	4	800	
DA05CM	5.0	6.0	24.6	45.0	200	500	6	800	 <b>8 PIN DIP</b>
DA12CM	12.0	13.3	32.9	34.0	2	385	6	800	
DA15CM	15.0	16.7	37.7	27.0	2	300	6	800	
DA24CM	24.0	26.7	53.0	20.0	2	200	6	800	
DA12CN	12.0	13.3	32.9	34.0	2	385	8	800	 <b>16 PIN DIP</b>
DA05CP	5.0	6.0	24.6	45.0	200	500	12	800	 <b>16 PIN DIP</b>
DA24CP	24.0	26.7	53.0	20.0	2	200	12	800	
DA05L	5.0	6.0	24.6	45.0	200	880	4	800	 <b>8 PIN DIP</b>
DA05M	5.0	6.0	24.6	45.0	200	880	6	800	 <b>8 PIN DIP</b>

**TVS DIODE ARRAYS**

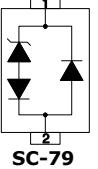
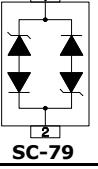
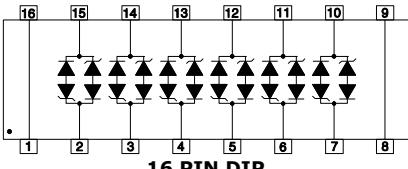
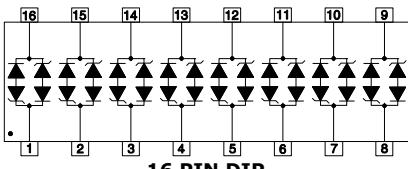
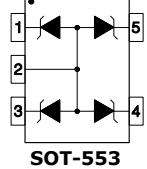
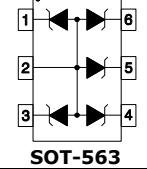
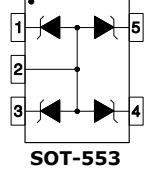
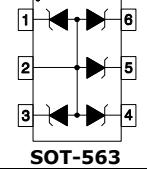
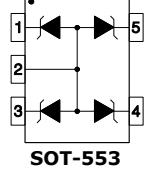
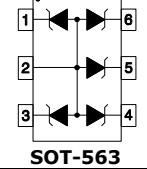
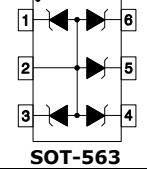
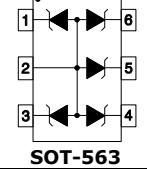
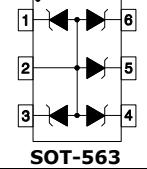
PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION								
DA05N	5.0	6.0	24.6	45.0	200	880	8	800		16	15	14	13	12	11	10	9
										1	2	3	4	5	6	7	8
DA05P	5.0	6.0	24.6	45.0	200	880	12	800		16	15	14	13	12	11	10	9
										1	2	3	4	5	6	7	8
DFN6-36	33.0	35.0	45.0	2.0	5.0	50	3	300		Pin 1							
DLZ-5A	5.0	6.0	10.6	10.0	200	880	15	1300		16	15	14	13	12	11	10	9
DLZ-12A	12.0	13.3	23.5	10.0	2	440	15	1300		1	2	3	4	5	6	7	8
DLZ-17A	17.0	19.2	33.9	10.0	2	330	15	1300									
DLZ-24A	24.0	26.7	52.1	10.0	2	275	15	1300									
DLZ-30A	30.0	33.3	58.8	10.0	2	220	15	1300									
DLZ-8C	8.0	8.5	16.6	10.0	10	440	15	1300		16	15	14	13	12	11	10	9
DLZ-13CA	13.0	14.4	25.4	10.0	4	385	15	1300		1	2	3	4	5	6	7	8
DLZ-19CA	19.0	21.6	42.1	10.0	4	275	15	1300									
DLZ-30CA	30.0	33.3	58.8	10.0	4	165	15	1300									
<b>Note:</b> The DLZ Series is not ROHS Compliant.																	
DL0521P	5.0	6.0	20	1	1	0.6	1	20		1							
										2							
DSOT0502	5.0	6.0	12.5	2.0	2	9	1	25		1	2						
										3							
EBLC05C	5.0	6.0	18.3	17.0	5	3	1	250		1							
										2							

**PIN CONFIGURATION**

**16 PIN DIP**

**16 PIN DIP**

**Top View**
**DFN-6**

**16 PIN DIP CERAMIC**

**16 PIN DIP CERAMIC**

**DFN-2-0402**

**SOT-883**

**SOD-323**

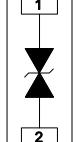
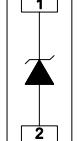
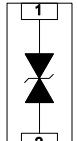
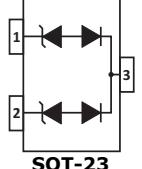
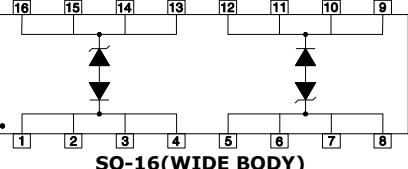
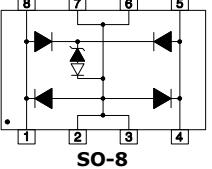
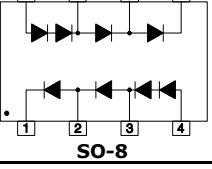
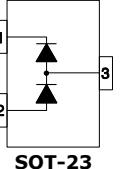
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
ESD4-DFN	5.0	6.0	12.0	1.0	0.1 @ 3V	7 @ 2.5V	4	25	
ESOT3.3LC-2	3.3	3.5	6.5	1.0	2.0	15	2	175	
ESOT3.3LCC	3.3	3.6	-	-	2.0	15	1	50	
ESOT12LCC-1	12.0	13.3	19.0	1.0	1.0	3	2	250	
ESOT24LCC-2	24.0	26.6	-	-	1.0	6	2	100	
GBLC03	3.3	4.0	7.0	1.0	5	3	1	350	
GBLC05	5.0	6.0	9.8	1.0	5	3	1	350	
GBLC03I	3.0	4.0	7.0	1.0	5	0.6	1	250	
GBLC05I	5.0	6.0	9.8	1.0	5	0.6	1	250	
GBLC12I	12.0	13.3	19.0	1.0	1	0.6	1	250	
GBLC03LC	3.3	4.0	7.0	1.0	5	0.8	1	250	
GBLC05LC	5.0	6.0	9.8	1.0	5	0.7	1	250	
GBLLC03	3.0	4.0	7.0	1.0	1.0	0.4	1	200	
GBLC03C	3.3	4.0	7.0	1.0	5	3	1	350	
GBLC05C	5.0	6.0	9.8	1.0	5	3	1	350	
GBLC08C	8.0	8.5	13.4	1.0	2	3	1	350	
GBLC12C	12.0	13.3	19.0	1.0	1	3	1	350	
GBLC15C	15.0	16.7	24.0	1.0	1	3	1	350	
GBLC24C	24.0	26.7	43.0	1.0	1	3	1	350	
GBLC03CIHP	3.0	4.0	24.0	20.0	5	0.6	1	500	
GBLC03CI	3.0	4.0	7.0	1.0	5	0.6	1	250	
GBLC05CI	5.0	6.0	9.8	1.0	5	0.6	1	250	
GBLC12CI	12.0	13.3	19.0	1.0	1	0.6	1	250	
GBLC03CLC	3.3	4.0	7.0	1.0	5	0.8	1	250	
GBLC05CLC	5.0	6.0	9.8	1.0	5	0.7	1	250	
GBLLC03C	3.0	4.0	7.0	1.0	1	0.4	1	200	

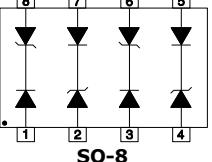
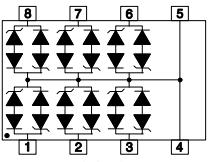
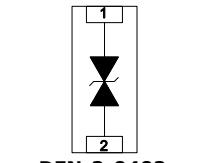
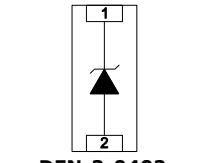
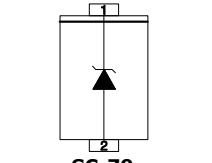
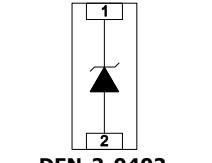
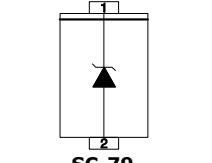
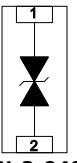
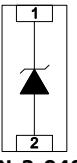
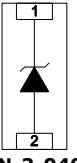
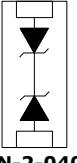
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION									
GBLCSC03	3.3	4.0	13.0	10.0	1	1.5	1	200	 <b>SC-79</b>	 <b>SC-79</b>								
GBLCSC05	5.0	6.0	16.0	10.0	1	1.5	1	200										
GBLCSC08	8.0	8.5	-	-	1	1.5	1	200										
GBLCSC03C	3.3	4.0	13.0	10.0	1	1.5	1	200	 <b>16 PIN DIP</b>	 <b>16 PIN DIP</b>								
GBLCSC05C	5.0	6.0	16.0	10.0	1	1.5	1	200										
GBLCSC08C	8.0	8.5	-	-	1	1.5	1	200										
GBLCSC08CLC	8.0	8.5	13.0	1.0	1.0	0.4	1	125	 <b>SOT-553</b>	 <b>SOT-563</b>								
LCA05C	5.0	6.0	24.0	45.0	100	15	6	800										
LCA12C	12.0	13.3	32.0	34.0	4	15	6	800										
LCD05C	5.0	6.0	24.0	45.0	100	15	8	800	 <b>SOT-553</b>	 <b>SOT-563</b>								
LCD08C	8.0	8.5	25.5	40.0	10	15	8	800										
LCD12C	12.0	13.3	32.0	34.0	4	15	8	800										
LCD24C	24.0	26.7	48.0	22.0	4	15	8	800	 <b>SOT-553</b>	 <b>SOT-563</b>								
MSMF05	5.0	6.0	12.0	9.0	1	40	3-4	100										
MSMF05C	5.0	6.0	12.0	9.0	1	40	4-5	100										
MSMF05LC*	5.0	6.0	12.0	2.0	1	9	3-4	25										
<b>Note*:</b> Also available in SOT-953 package configuration, part number VSMF05LC										 <b>SOT-563</b>								
MSMF05LCC*	5.0	6.0	12.0	2	1	9	4-5	25	 <b>SOT-563</b>									
<b>Note*:</b> Also available in SOT-963 package configuration, part number VSMF05LCC										 <b>SOT-563</b>								

**TVS DIODE ARRAYS**

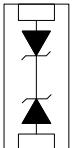
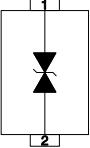
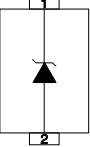
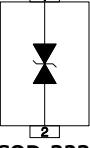
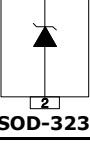
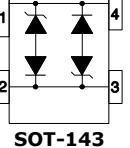
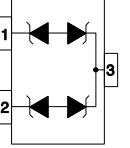
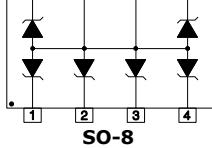
PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
P0201D05C	4.7	5.7	16.0	1.0	0.1	5	1	10	 DFN-2-0201
P5V0S1UL	5.0	6.0	9.8	1.0	1.0	70	1	150	 DFN-2-0402
P5V0S1ULC	5.0	6.0	9.8	1.0	1.0	30	1	110	 DFN-2-0402
PDLC05	5.0	6.0	9.8	1.0	5	0.8	1	15	 SOT-23
PLC01-6*	6.0	8.0	15.0	100	25	50	1	1500	 SO-16(WIDE BODY)
<b>Note*: <math>I_{PP}</math> &amp; <math>P_{PP}</math> @ 10/1000μs</b>									
PLC03-3.3	3.0	2.8	18.0	100	2	25	1	1800	 SO-8
PLC496	1.0	2.5	12.5	30.0	20	1.25	1	500	 SO-8
PLC497	1.0	1.3	5.0	5.0	20	2.5	1	200	 SOT-23

**TVS DIODE ARRAYS**

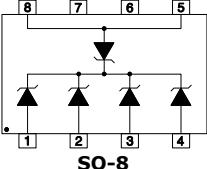
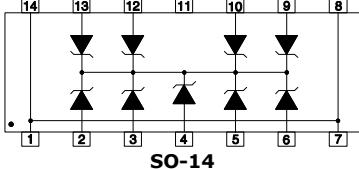
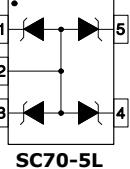
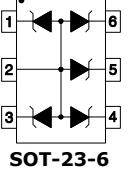
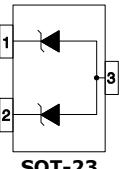
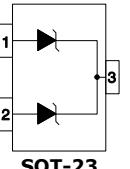
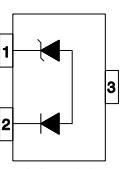
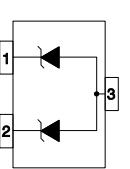
PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	<b>PIN CONFIGURATION</b>							
									PLCDA05	PLCDA12	PLCDA15	PLCDA03C-6	PLCDA05C-6	PLCDA08C-6	PLCDA15C-6	PLR0521
PLCDA05	5.0	6.0	9.8	1.0	20	5	2P	500								
PLCDA12	12.0	13.3	19.0	1.0	1	5	2P	500								
PLCDA15	15.0	16.7	24.0	1.0	1	5	2P	500								
PLCDA03C-6	3.3	4.5	7.0	1.0	125	8	6	500								
PLCDA05C-6	5.0	6.0	9.8	1.0	20	8	6	500								
PLCDA08C-6	8.0	8.5	13.4	1.0	10	8	6	500								
PLCDA15C-6	15.0	16.7	24.0	1.0	2	8	6	500								
PLR0521	5.0	6.0	20.0	4.0	1	0.4	1	80								
PLW0501D	5.0	6.0	9.8	1.0	1	70	1	150								
PLW0501H	5.0	6.0	12.5	16.0	5	120	1	250								
PLW0501P	5.0	6.0	12.5	16.0	5	120	1	250								
PLW1201H	12.0	13.3	24.0	5.0	1	50	1	200								
PRS6.8C	4.7	5.7	-	-	1	15	1	10*								

Note\*: Power at 10/1000μs. Also available in SOD-723 package configuration, part number RSB6.8G.

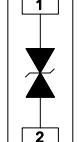
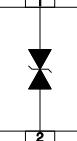
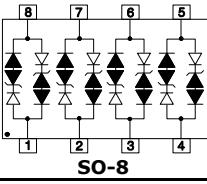
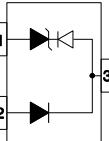
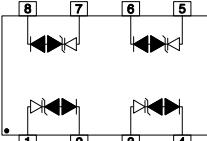
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - μA @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
PRSB6.8CT	4.7	5.7	-	-	1.0	15	1	10*	 <b>DFN-2-0402</b>
<b>Note*:</b> Power at 10/1000μs.									
PRSB6.8D	4.7	5.7	-	-	0.5	15	1	10*	 <b>SOD-923</b>
<b>Note*:</b> Power at 10/1000μs.									
PSD03	3.3	4.0	6.5	1.0	125	500	1	500	 <b>SOD-323</b>
PSD05	5.0	6.0	9.8	1.0	10	350	1	500	
PSD12	12.0	13.3	19.0	1.0	1	150	1	500	
PSD15	15.0	16.7	24.0	1.0	1	100	1	500	
PSD24	24.0	26.7	43.0	1.0	1	88	1	500	
PSD36	36.0	40.0	60.0	1.0	1	75	1	500	
PSD03C	3.3	4.0	7.0	1.0	125	200	1	400	 <b>SOD-323</b>
PSD05C	5.0	6.0	9.8	1.0	10	175	1	400	
PSD12C	12.0	13.3	19.0	1.0	1	50	1	400	
PSD15C	15.0	16.7	24.0	1.0	1	40	1	400	
PSD24C	24.0	26.7	43.0	1.0	1	40	1	400	
PSD36C	36.0	40.0	60.0	1.0	1	35	1	400	
PSD05HP	5.0	6.0	15.0	72.0	20.0	800	1	1000	 <b>SOD-323</b>
PSLC05C	5.0	6.0	18.3	17.0	20	3	1	350	 <b>SOT-143</b>
PSLC12C	12.0	13.3	28.6	11.0	1	3	1	350	
PSLC15C	15.0	16.6	31.8	10.0	1	3	1	350	
PSLC24C	24.0	26.7	56.0	6.0	1	3	1	350	
PSM712 Pin 3-1, 3-2 Pin 1-3, 2-3	7.0 12.0	7.5 13.3	17.0 30.0	34.0 30.0	20 1	75 75	1 1	600 600	 <b>SOT-23</b>
PSMDA05-6	5.0	6.0	18.0	17.0	20	120	5-6	350	 <b>SO-8</b>

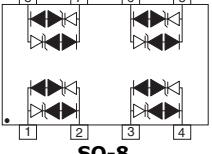
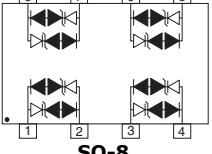
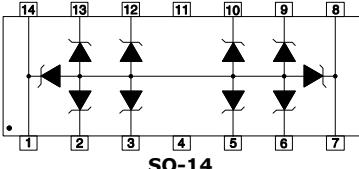
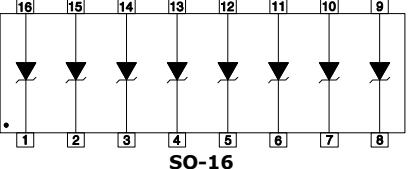
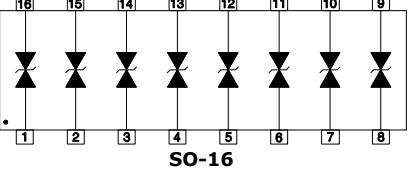
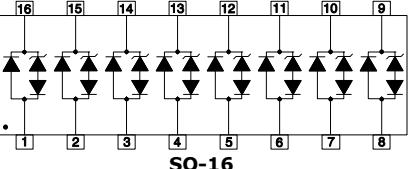
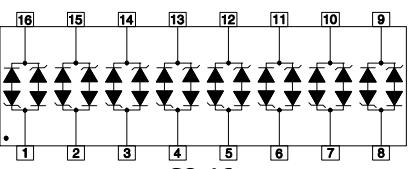
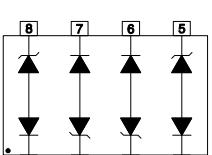
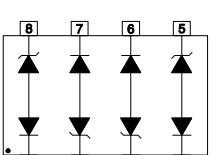
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
PSMDA12C-4	12.0	13.3	29.0	20.0	1	150	4	500	 <b>SO-8</b>
PSMDA15C-4	15.0	16.7	32.0	18.0	1	120	4	500	
PSMDA24C-4	24.0	26.7	45.0	13.0	1	100	4	500	
PSMDA05C-8	5.0	6.0	15.4	30.0	100	350	8	450	 <b>SO-14</b>
PSMDA15C-8	15.0	16.7	32.4	14.0	1	120	8	450	
PSMDA24C-8	24.0	26.7	45.0	10.0	1	100	8	450	
PSMF05	5.0	6.0	9.5	1.0	10	60	4	100	 <b>SC70-5L</b>
PSMS05C*	5.0	6.0	9.8	1.0	20	150	4	350	 <b>SOT-23-6</b>
<b>Note*: PSMS &amp; PSMSxxC Series are identical to SMS &amp; SMSxxC Series</b>									
PSOT03C	3.3	4.0	10.9	43.0	125	300	1	500	 <b>SOT-23</b>
PSOT05C	5.0	6.0	13.5	42.0	20	210	1	500	
PSOT12C	12.0	13.3	25.9	21.0	2	90	1	500	
PSOT15C	15.0	16.7	30.0	17.0	1	60	1	500	
PSOT24C	24.0	26.7	49.0	12.0	1	63	1	500	
PSOT36C	36.0	40.0	76.8	9.0	1	60	1	500	
PSOT05CU	5.0	6.0	9.8	1.0	10	210	1-2	300	 <b>SOT-23</b>
PSOT36KCA	33.0	36.0	66.0	6.0	0.1	45	2	300	
PSOT03LC	3.3	4.0	7.0	5.0	125	5	1	500	
PSOT05LC	5.0	6.0	9.8	5.0	20	5	1	500	 <b>SOT-23</b>
PSOT08LC	8.0	8.5	15.0	5.0	10	5	1	500	
PSOT15LC	15.0	16.7	28.0	5.0	1	5	1	500	
PSOT24LC	24.0	26.7	46.0	5.0	1	5	1	500	 <b>SOT-23</b>
PSOT05LCC	5.0	6.0	15.0	20.0	10	120	1	300	

**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
PSSB05P	5.0	6.0	20.0	1.0	1	0.3	1	20	 <b>DFN-2-0402</b>
RSB6.8B*	4.7	5.7	-	-	0.5**	30	1	10**	 <b>SOD-323</b>
<b>Note*:</b> Also available in SOD-723 package configuration, part number PRSB6.8C. <b>Note**:</b> $P_{PP}$ @ 10/1000μs, Leakage Current - $V_{WM}$ @ 3.5V									
RSB6.8G*	4.7	5.7	-	-	0.5**	15	1	10**	 <b>SOD-323</b>
<b>Note*:</b> Also available in SOD-723 package configuration, part number PRSB6.8C. <b>Note**:</b> $P_{PP}$ @ 10/1000μs, Leakage Current - $V_{WM}$ @ 3.5V									
RSB6.8S*	4.7	5.7	-	-	0.5**	30	1	10**	 <b>SC-79</b>
<b>Note*:</b> Also available in SOD-723 package configuration, part number PRSB6.8C. <b>Note**:</b> $P_{PP}$ @ 10/1000μs, Leakage Current - $V_{WM}$ @ 3.5V									
SLVDA2.8LC	2.8	3.0	21.0	30.0	1	5	4P	600	 <b>SO-8</b>
SLVU2.8	2.8	3.0	21.0	30.0	1	2.5	1	600	 <b>SOT-23</b>
SLVU2.8-4	2.8	3.0	21.0	30.0	1	3	2P	600	 <b>SO-8</b>

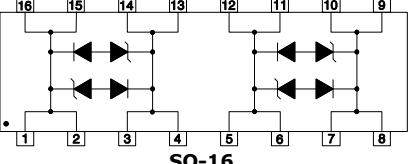
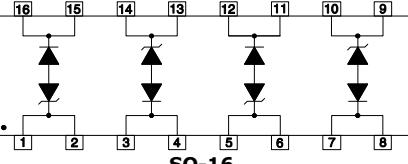
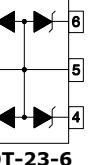
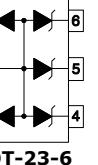
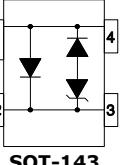
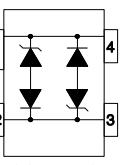
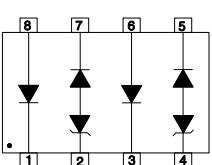
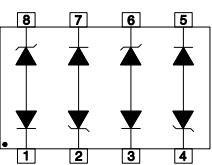
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	<b>PIN CONFIGURATION</b>							
SLVU2.8-8	2.8	3.0	17.0	30.0	1	6.0	4	500			<b>SO-8</b>					
SLVU2.8-8G	2.8	3.0	17.0	30.0	1	6.2	4P	600			<b>SO-8</b>					
SM14M05C	5.0	6.0	17.8	47.0	100	500	8	800			<b>SO-14</b>					
SM14M12C	12.0	13.3	26.6	34.0	2	385	8	800								
SM14M15C	15.0	16.7	33.1	25.0	2	300	8	800								
SM14M24C	24.0	26.7	42.1	19.0	2	200	8	800								
SM1605	5.0	6.0	13.5	42.0	10	550	8	500			<b>SO-16</b>					
SM1612	12.0	13.3	25.9	21.0	2	185	8	500								
SM1615	15.0	16.7	30.0	17.0	2	140	8	500								
SM1605C	5.0	6.0	13.5	42.0	10	310	8	500			<b>SO-16</b>					
SM1612C	12.0	13.3	25.9	21.0	2	105	8	500								
SM1615C	15.0	16.7	30.0	17.0	2	80	8	500								
SM16LC03	3.3	4.5	20.0	35.0	125	15	8	500			<b>SO-16</b>					
SM16LC05	5.0	6.0	24.0	42.0	20	15	8	500								
SM16LC05C	5.0	6.0	24.0	42.0	20	15	8	500								
SM16LC08C	8.0	8.5	26.0	30.0	10	15	8	500			<b>SO-16</b>					
SM16LC12C	12.0	13.3	33.0	21.0	2	15	8	500								
SM16LC15C	15.0	16.7	39.0	15.0	2	15	8	500								
SM16LC24C	24.0	26.7	57.0	10.0	2	15	8	500			<b>SO-8</b>					
SM16LC36C	36.0	40.0	72.0	7.0	2	15	8	500								
SM8LC05	5.0	6.0	24.6	45.0	100	25	2P	800								
SM8LC08	8.0	8.5	25.5	40.0	10	25	2P	800			<b>SO-8</b>					
SM8LC12	12.0	13.3	32.9	34.0	4	25	2P	800								

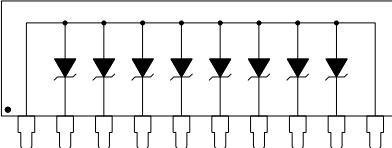
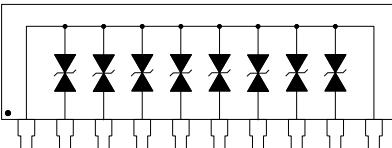
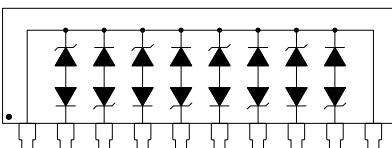
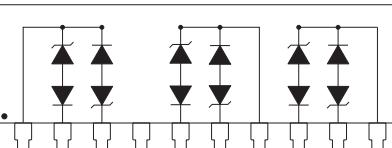
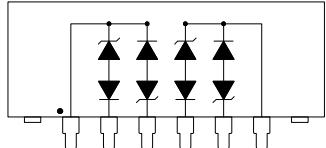
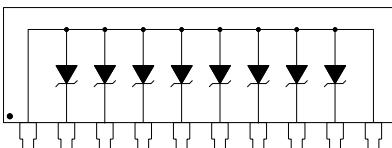
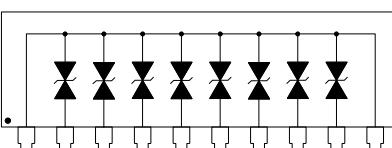
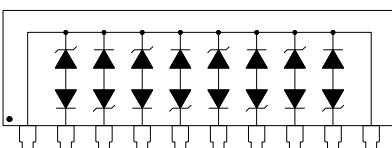
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
SMDA03	3.3	4.0	7.0	5.0	125	800	4	500	
SMDA05	5.0	6.0	10.0	5.0	20	550	4	500	
SMDA15	15.0	16.7	27.0	5.0	1	140	4	500	
SMDA24	24.0	26.7	49.0	5.0	1	88	4	500	
SMDA36	36.0	40.0	76.8	5.0	1	80	4	500	
SMDA05C	5.0	6.0	10.0	5.0	20	308	4	500	
SMDA08C	8.0	8.5	14.0	5.0	10	300	4	500	
SMDA12C	12.0	13.3	22.0	5.0	1	105	4	500	
SMDA15C	15.0	16.7	27.0	5.0	1	80	4	500	
SMDA24C	24.0	26.7	45.0	5.0	1	50	4	500	
SMDA03LC	3.3	4.5	10.9	43.0	125	15	4	500	
SMDA05LC	5.0	6.0	13.5	42.0	20	15	4	500	
SMDA24LC	24.0	26.7	49.0	12.0	1	15	4	500	
SMDA03LCC	3.3	4.5	10.9	43.0	125	15	4	500	
SMDA05LCC	5.0	6.0	13.5	42.0	20	15	4	500	
SMDA08LCC	8.0	8.5	16.9	34.0	10	15	4	500	
SMDA15LCC	15.0	16.7	30.0	17.0	1	15	4	500	
SMDA15CM	15.0	16.7	31.1	18.0	1	100	4-7	500	
SMDB05	5.0	6.0	24.6	45.0	25	880	4	800	
SMDB24	24.0	26.7	48.5	20.0	2	275	4	800	
SMDB05C	5.0	6.0	24.6	45.0	25	493	4	800	
SMDB12C	12.0	13.3	32.9	34.0	2	248	4	800	
SMDB15C	15.0	16.7	38.5	27.0	2	225	4	800	
SMDB24C	24.0	26.7	48.5	20.0	2	155	4	800	
SMF05C	5.0	6.0	9.8	5.0	5	60	4-5	100	
SMF12C	12.0	13.3	19.0	5.0	1	30	4-5	100	

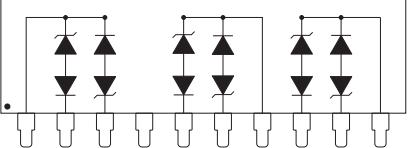
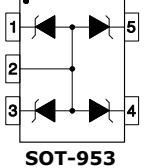
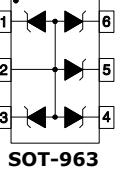
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
SMLC6.5C-2	6.5	7.2	28.0	150	300	30	2P	3900	 <b>SO-16</b>
SMLC12C-2	12.0	13.3	35.0	140	2	30	2P	3900	
SMP6LC05-2P	5.0	6.0	26.0	150	300	15	2P	3900	 <b>SO-16</b>
SMP6LC6.5-2P	6.5	7.2	28.0	150	300	15	2P	3900	
SMP6LC12-2P	12.0	13.3	35.0	140	2	15	2P	3900	
SMP6LC15-2P	15.0	16.7	50.0	110	2	15	2P	3900	
SMP6LC24-2P	24.0	26.7	57.0	80	2	15	2P	3900	
SMS05*	5.0	6.0	9.8	1.0	20	150	4	350	 <b>SOT-23-6</b>
SMS05C*	5.0	6.0	9.8	1.0	20	150	4	350	 <b>SOT-23-6</b>
Note*: PSMS & PSMSxxC Series are identical to SMS & SMSxxC Series									
USB0405	5.0	6.0	18.3	17.0	20	5	1	350	 <b>SOT-143</b>
USB0412	12.0	13.3	28.6	11.0	1	5	1	350	
USB0415	15.0	16.6	31.8	10.0	1	5	1	350	
USB0424	24.0	26.7	56.0	6.0	1	5	1	350	
USB0403C	3.3	4.0	19.0	20.0	125	5	1	350	 <b>SOT-143</b>
USB0405C	5.0	6.0	18.3	17.0	20	5	1	350	
USB0412C	12.0	13.3	28.6	11.0	1	5	1	350	
USB0415C	15.0	16.6	31.8	10.0	1	5	1	350	
USB0424C	24.0	26.7	56.0	6.0	1	5	1	350	
USB50803	3.3	4.5	11.0	5.0	125	3	1	500	 <b>SO-8</b>
USB50805	5.0	6.0	13.0	5.0	20	3	1	500	
USB50812	12.0	13.3	26.0	5.0	1	3	1	500	
USB50815	15.0	16.7	32.0	5.0	1	3	1	500	
USB50824	24.0	26.7	57.0	5.0	1	3	1	500	
USB50803C	3.3	4.5	11.0	5.0	125	3	1	500	 <b>SO-8</b>
USB50805C	5.0	6.0	13.0	5.0	20	3	1	500	
USB50812C	12.0	13.3	26.0	5.0	1	3	1	500	
USB50815C	15.0	16.7	32.0	5.0	1	3	1	500	
USB50824C	24.0	26.7	57.0	5.0	1	3	1	500	

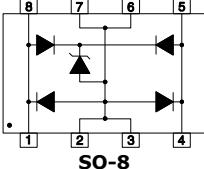
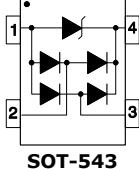
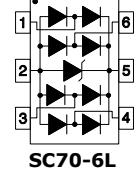
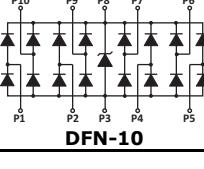
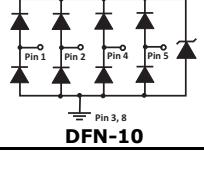
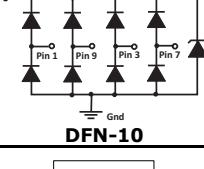
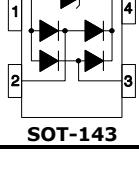
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION	
VS10P05	5.0	6.0	12.5	10.0	100	880	8	800		<b>10 PIN VSIP</b>
VS10P08	8.0	8.5	16.6	10.0	10	800	8	800		
VS10P12	12.0	13.3	22.7	10.0	1	440	8	800		
VS10P05C	5.0	6.0	12.5	10.0	100	500	8	800		<b>10 PIN VSIP</b>
VS10P24C	24.0	26.7	45.6	10.0	1	275	8	800		
VS10P03LC	3.3	4.5	9.0	5.0	125	15	4	300		<b>10 PIN VSIP</b>
VS10P05LC	5.0	6.0	12.5	10.0	100	25	4	800		
VS10P05LCI	5.0	6.0	12.5	10.0	100	25	3	800		<b>10 PIN VSIP</b>
VSB06P05LCI†	5.0	6.0	16.5	36.0	300	50	2	600		<b>6 PIN VSIP</b>
<b>Note†:</b> $P_{PP}$ @ 10/1000μs										
VSB10P05	5.0	6.0	9.1	10.0	300	4000	8	3400		<b>10 PIN VSIP</b>
VSB10P24	24.0	26.7	37.8	10.0	2	1250	8	3400		
VSB10P05C	5.0	6.0	9.1	10.0	300	2000	8	3400		
VSB10P33C	33.0	36.7	51.9	10.0	2	400	8	3400		<b>10 PIN VSIP</b>
VSB10P05LC	5.0	6.0	9.1	10.0	300	100	4P	3400		<b>10 PIN VSIP</b>

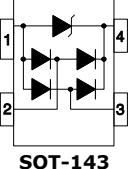
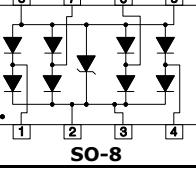
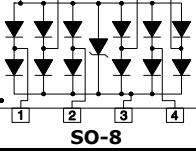
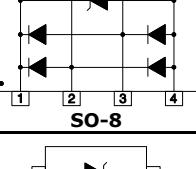
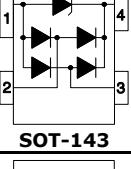
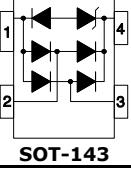
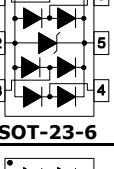
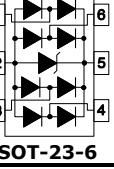
**TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	<b>PIN CONFIGURATION</b>	
VSB10P05LCI	5.0	6.0	9.1	10.0	300	100	3P	3400		<b>10 PIN VSIP</b>
VSMF05LC*	5.0	6.0	12.0	2.0	1	9	4	25		<b>SOT-953</b>
<b>Note*:</b> Also available in SOT-553 package configuration, part number MSMF05LC										
VSMF05LCC*	5.0	6.0	12.0	2	1	9	4-5	25		<b>SOT-963</b>
<b>Note*:</b> Also available in SOT-563 package configuration, part number MSMF05LC										

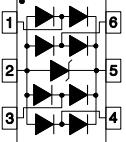
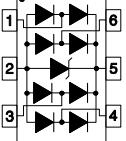
**STEERING DIODE/TVS COMBO**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{BR}$	CLAMPING VOLTAGE - $V_C @ I_{PP}$	CURRENT $I_{PP} @ 8/20\mu s$ - A	LEAKAGE CURRENT - $\mu A @ V_{WM}$	CAPACITANCE $C_{J(SD)}$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
PLC03-6	6.0	6.8	20.0	100.0	25	8	2	2000	 <b>SO-8</b>
PLR0502	5.0	6.0	20.0	10.0	1.0	0.6	2	200	 <b>SOT-543</b>
PLR0504F	5.0	6.0	25.0	5.0	3	1.9	4	200	 <b>SC70-6L</b>
PLR0508	5.0	6.0	13.0	5.0	1.0	1.6	8	200	 <b>DFN-10</b>
PLR0524P	5.0	6.0	16.5	4.0	0.5	0.8	4	60	 <b>DFN-10</b>
PLR3304	3.3	3.3	10.0	10.0	1.0	4.0	2	400	 <b>DFN</b>
PSR05	5.0	6.0	20.0	28.0	5	10	2	500	 <b>SOT-143</b>

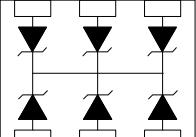
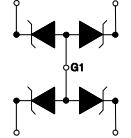
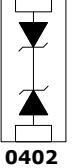
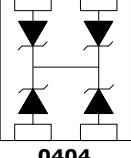
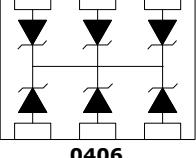
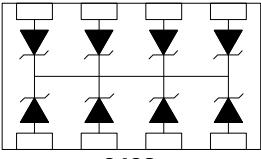
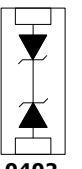
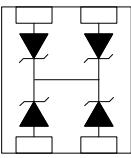
**STEERING DIODE/TVS COMBO**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{BR}$	CLAMPING VOLTAGE - $V_C$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - μA @ $V_{WM}$	CAPACITANCE $C_{JC(SD)}$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION
PSR05LC	5.0	6.0	20.0	28.0	5	2.5	2	500	 <b>SOT-143</b>
PSRDA3.3-4	3.3	4.0	6.5	1.0	125	5	4	500	 <b>SO-8</b>
PSRDA05-4	5.0	6.0	9.8	1.0	20	5	4	500	
PSRDA12-4	12.0	13.3	19.0	1.0	1	5	4	500	
PSRDA15-4	15.0	16.7	24.0	1.0	1	5	4	500	
PSRDA3.3-6	3.3	4.0	6.5	1.0	125	5	6	500	 <b>SO-8</b>
PSRDA05-6	5.0	6.0	9.8	1.0	20	5	6	500	
PUSB6B	5.25	6.0	13.2	35.0	10	15	2	500	 <b>SO-8</b>
SR12	12.0	13.3	30.0	16.0	1	10	2	500	 <b>SOT-143</b>
SR2.8	2.8	3.0 @ 2μA	8.5	5.0	1	4.5	2	300	 <b>SOT-143</b>
SR3.3	3.3	3.3 @ 2μA	15.0	10.0	1	4.5	2	300	
SRV05-4	5.0	6.0	15.0	5.0	5	3.5	4	500	 <b>SOT-23-6</b>
SRV05-4LC	5.0	6.0	15.0	5.0	5	0.7	4	500	 <b>SOT-23-6</b>

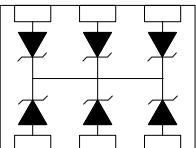
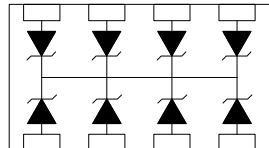
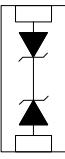
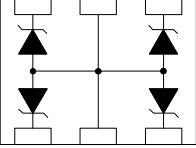
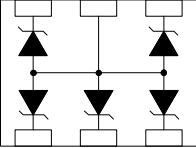
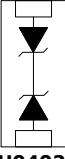
**STEERING DIODE/TVS COMBO**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_C$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_{J(SD)}$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION	
SRV05-4M	5.0	6.0	14.0	5.0	5	2.5	4	400		SOT-23-6
SRV2.8-4	2.8	3.0	8.5	5.0	5	3.5	4	500		SOT-23-6

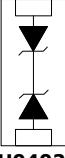
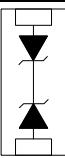
**FLIP CHIP ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{BR}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - μA @ $V_{WM}$	CAPACITANCE $C_T$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION	
CSP040605C	5.9	6.0	13.0	15.0	10	35	3-5	200		CHIP SCALE PACKAGE
ESD4-LFC*	5.0	6.0	8.0	0.01	0.1 @ 3.3V	15	4	-		5 BUMP FLIP CHIP
<b>Note*:</b> Capacitance measured @ 2.5V, 1MHz										
LC0402FC05C	5.9	6.0	13.0	15.0	10**	35	1	200		0402
LC0404FC05C	5.9	6.0	13.0	15.0	10**	35	1-3	200		0404
LC0406FC05C	5.9	6.0	13.0	15.0	10**	35	3-5	200		0406
LC0408FC05C	5.9	6.0	13.0	15.0	10**	35	4-7	200		0408
<b>Note**:</b> Maximum leakage current <500nA @ 3.3V for LC040xFC Series.										
P0402FC3.3C	3.3	4.0	12.5	20.0	75*	150	1	250		0402
P0402FC05C	5.0	6.0	14.7	17.0	10**	100	1	250		
P0402FC08C	8.0	8.5	19.2	13.0	10†	75	1	250		
P0402FC36C	36.0	40.0	84.0	3.0	1	25	1	250		
P0404FC05C	5.0	6.0	14.7	17.0	10**	100	1-3	250		0404

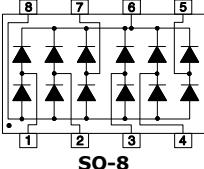
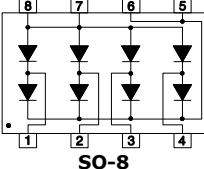
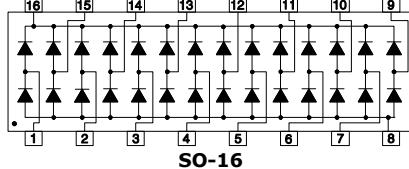
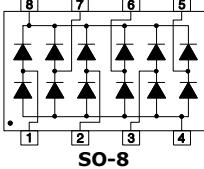
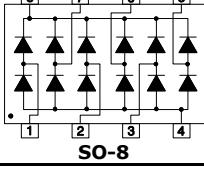
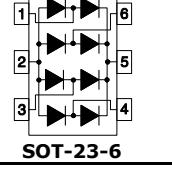
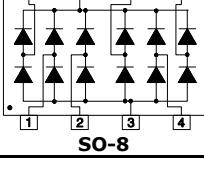
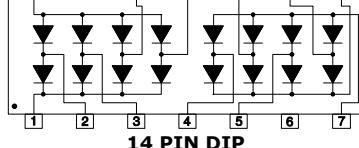
**FLIP CHIP ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{BR}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - μA @ $V_{WM}$	CAPACITANCE $C_T$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	PIN CONFIGURATION	
P0406FC05C	5.0	6.0	14.7	17.0	10**	100	3-5	250		<b>0406</b>
P0408FC05C	5.0	6.0	14.7	17.0	10**	100	4-7	250		<b>0408</b>
<b>Note:</b> P040xFC Series are patented under U.S. Patent No. Des. D456,367S.										
<b>Note*:</b> Max. Leakage current < 5μA @ 2.8V for P040xFC Series.										
<b>Note**:</b> Max. Leakage current <500nA @ 3.3V for P040xFC Series.										
<b>Note†:</b> Max. Leakage current < 200nA @ 5V for P040xFC Series.										
PKFC3.3C	3.3	4.0	12.5	20.0	75*	150	1	250		<b>E0503</b>
PKFC05C	5.0	6.0	14.7	17.0	10**	100	1	250		
<b>Note*:</b> Max. Leakage current < 5μA @ 2.8V.										
<b>Note**:</b> Max. Leakage current <500nA @ 3.3V.										
SFC05-4	5.0	6.0	11.0	24.0	10	150*	4	300		<b>QUAD</b>
<b>Note*:</b> Capacitance ratings reflect junction capacitance.										
SFC05-5	5.0	6.0	11.0	24.0	10	150*	4-5	250		<b>PENTA</b>
<b>Note*:</b> Capacitance ratings reflect junction capacitance.										
U0402FC3.3C	3.3	4.0	12.5	20.0	75*	150	1	250		<b>U0402</b>
U0402FC05C	5.0	6.0	14.7	17.0	10**	100	1	250		
U0402FC08C	8.0	8.5	19.2	13.0	10†	75	1	250		
<b>Note*:</b> Max. Leakage current < 5μA @ 2.8V for U040xFC Series.										
<b>Note**:</b> Max. Leakage current <500nA @ 3.3V for U040xFC Series.										
<b>Note†:</b> Max. Leakage current < 200nA @ 5V for U040xFC Series.										

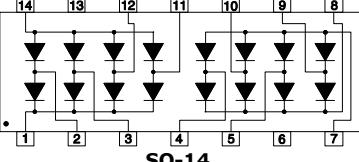
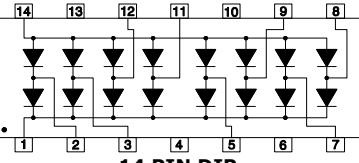
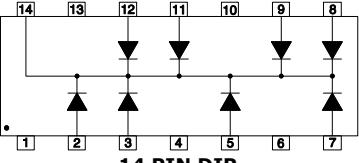
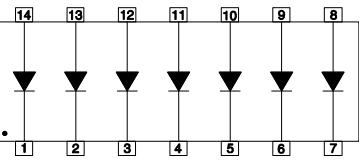
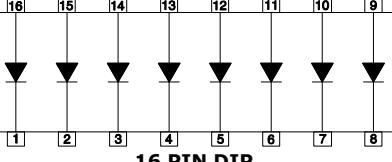
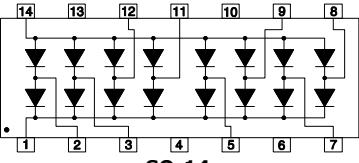
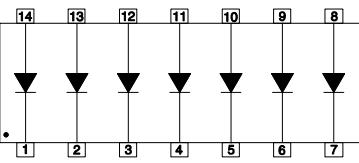
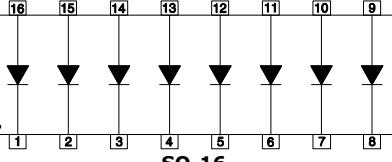
**FLIP CHIP ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{BR}$	CLAMPING VOLTAGE - $V_c$ @ $I_{PP}$	CURRENT $I_{PP}$ @ 8/20μs - A	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	CAPACITANCE $C_T$ - pF	NUMBER OF LINES	POWER @ 8/20μs - WATTS	<b>PIN CONFIGURATION</b>	
ULC0402FC3.3C	3.3	4.0	12.5	16.0	75*	70	1	200	 <b>U0402</b>	
ULC0402FC05C	5.9	6.0	13.0	15.0	10**	35	1	200		
ULC0402FC08C	8.0	8.5	18.0	11.0	1	32	1	200		
<b>Note*:</b> Max. Leakage current < 5μA @ 2.8V for ULC040xFC Series. <b>Note**:</b> Max. Leakage current <500nA @ 3.3V for ULC040xFC Series. <b>Note†:</b> Max. Leakage current < 200nA @ 5V for ULC040xFC Series.										
ULLC0402FC05C	5.0	6.0	-	-	1	6	1	-	 <b>U0402</b>	

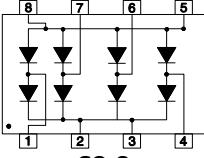
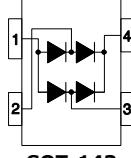
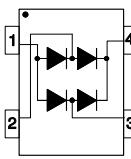
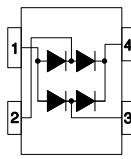
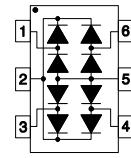
## STEERING DIODES

PART NUMBER	REPETITIVE PEAK REV. VOLT. - VRM	FORWARD PEAK PULSE CURRENT - A	FORWARD VOLTAGE $V_F$ @ $I_F$	LEAKAGE CURRENT - $\mu A$ @ $V_{RRM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	<b>PIN CONFIGURATION</b>
DALC112S1	20.0	12.0	1.3 @ 50mA	0.02 @ 18V	5	6	 SO-8
ET108	25.0	12.0	9 @ 12A	2	6	4	 SO-8
ET720	30.0	12.0	2 @ 1A	0.02 @ 20V	3	14	 SO-16
ET721	50.0	12.0	2 @ 1A	0.02	3	6	 SO-8
ET723	20.0	12.0	2 @ 1A	0.02	5	6	 SO-8
ET724	20.0	12.0	2 @ 1A	0.01	3	4	 SOT-23-6
IO6LC	30.0	3.5	0.95 @ 20mA	0.1 @ 5.5V	3	6	 SO-8
MAD1107	50.0	12.0	1.2 @ 100mA	0.1 @ 40V	5	8	 14 PIN DIP

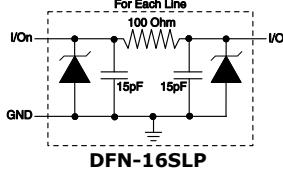
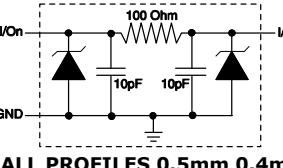
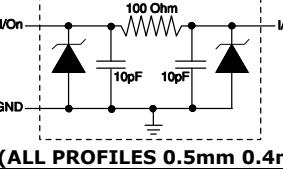
## STEERING DIODES

PART NUMBER	REPETITIVE PEAK REV. VOLT. - VRM	FORWARD PEAK PULSE CURRENT - A	FORWARD VOLTAGE $V_F$ @ $I_F$	LEAKAGE CURRENT - $\mu A$ @ $V_{RRM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	PIN CONFIGURATION								
MMAD1107	50.0	12.0	1.2 @ 100mA	0.1 @ 40V	5	8		14	13	12	11	10	9	8	
PMAD1103	50.0	40.0	1.2 @ 100mA	0.1 @ 40V	5	8		14	13	12	11	10	9	8	
PMAD1105	50.0	40.0	1.2 @ 100mA	0.1 @ 40V	5	8		14	13	12	11	10	9	8	
PMAD1109	50.0	40.0	1.2 @ 100mA	0.1 @ 40V	5	7		14	13	12	11	10	9	8	
MAD1108	50.0	12.0	1.2 @ 100mA	0.1 @ 40V	5	8		16	15	14	13	12	11	10	9
PMAD1108	50.0	40.0	1.2 @ 100mA	0.1 @ 40V	5	8		1	2	3	4	5	6	7	8
PMMAD1103	50.0	40.0	1.2 @ 100mA	0.1 @ 40V	5	8		14	13	12	11	10	9	8	
PMMAD1109	50.0	40.0	1.2 @ 100mA	0.1 @ 40V	5	7		14	13	12	11	10	9	8	
MMAD1108	50.0	12.0	1.2 @ 100mA	0.1 @ 40V	5	8		16	15	14	13	12	11	10	9
PMMAD1108	50.0	40.0	1.2 @ 100mA	0.1 @ 40V	5	8		1	2	3	4	5	6	7	8

**STEERING DIODES**

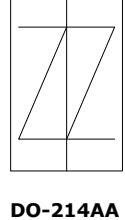
PART NUMBER	REPETITIVE PEAK REV. VOLT. - VRM	FORWARD PEAK PULSE CURRENT - A	FORWARD VOLTAGE $V_F$ @ $I_F$	LEAKAGE CURRENT - $\mu A$ @ $V_{RRM}$	CAPACITANCE $C_J$ - pF	NUMBER OF LINES	<b>PIN CONFIGURATION</b>	
PSRDA70-4	70.0	24.0	1.1 @ 100mA	5	6	4		<b>SO-8</b>
SR70	70.0	24.0	1.5 @ 1A	1	10	2		<b>SOT-143</b>
USB002	20.0	12.0	1.4 @ 10mA	1 @ 5V	0.6	2		<b>SOT-543</b>
USB004	20.0	12.0	0.95 @ 20mA	1 @ 5V	6.0	2		<b>SOT-143</b>
USB208	20.0	12.0	1.2 @ 50mA	1 @ 5V	5	4		<b>SOT-23-6</b>

**EMI FILTER/TVS DIODE ARRAYS**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$ @ 1 mA	REVERSE LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	RESISTANCE $\pm 20\%$ - OHMS	CUT-OFF FREQUENCY - MHz (50 Ohm System)	CAPACITANCE $C_T$ - pF	NUMBER OF LINES	PIN CONFIGURATION		
EM1631-08DSLP	5.0	6.0	0.1 @ 3V	100	110	30	8		For Each Line	DFN-16SLP
EM4D-100L	5.0	6.0	0.1 @ 3V	100	150	20	4			DFN-8 (ALL PROFILES 0.5mm 0.4mm Pitch)
EM4DLP-100L	5.0	6.0	0.1 @ 3V	100	150	20	4			DFN-16 (ALL PROFILES 0.5mm 0.4mm Pitch)
EM8D-100L	5.0	6.0	0.1 @ 3V	100	150	20	8			
EM8DLP-100L	5.0	6.0	0.1 @ 3V	100	150	20	8			
EM8DSPL-100L	5.0	6.0	0.1 @ 3V	100	150	20	8			

**THYRISTORS**

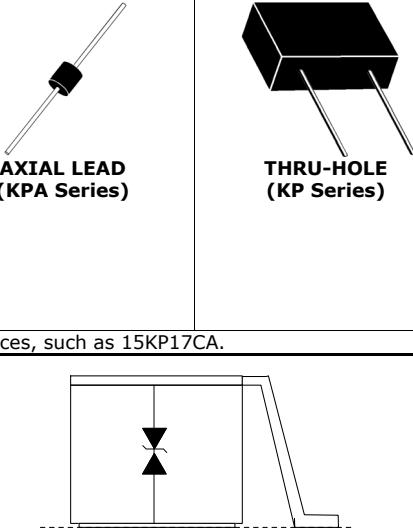
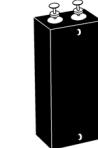
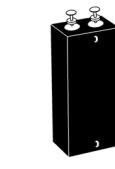
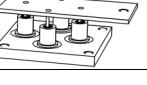
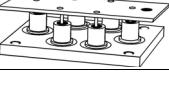
PART NUMBER	REPETITIVE PEAK OFF-STATE VOLTAGE - $V_{DRM}$	SWITCHING VOLTAGE - $V_S$	MINIMUM HOLDING CURRENT - mA $I_H$	SWITCHING CURRENT - mA $I_S$	MAX. OFF-STATE CURRENT - $\mu A$ @ $V_{DRM}$	MAX. ON-STATE VOLTAGE - $V_T$	ON-STATE CURRENT - A $I_T$	CAPACITANCE $C_T$ - pF	<b>PIN CONFIGURATION</b>																																	
									PP0640SA	PP0720SA	PP0800SA	PP1100SA	PP1300SA	PP1500SA	PP1800SA	PP2300SA	PP2600SA	PP3100SA	PP3500SA	PP0300SB	PP0640SB	PP0720SB	PP0800SB	PP1100SB	PP1300SB	PP1500SB	PP1800SB	PP2300SB	PP2600SB	PP3100SB	PP3500SB	PP0640SC	PP0720SC	PP0800SC	PP1100SC	PP1300SC	PP1500SC	PP1800SC	PP2300SC	PP2600SC	PP3100SC	PP3500SC
PP0640SA	58	77	150	800	5	4	2.2	60																																		
PP0720SA	65	88	150	800	5	4	2.2	60																																		
PP0800SA	75	98	150	800	5	4	2.2	60																																		
PP1100SA	90	130	150	800	5	4	2.2	60																																		
PP1300SA	120	160	150	800	5	4	2.2	40																																		
PP1500SA	140	180	150	800	5	4	2.2	40																																		
PP1800SA	160	220	150	800	5	4	2.2	40																																		
PP2300SA	190	260	150	800	5	4	2.2	30																																		
PP2600SA	220	300	150	800	5	4	2.2	30																																		
PP3100SA	275	350	150	800	5	4	2.2	30																																		
PP3500SA	300	400	150	800	5	4	2.2	30																																		
PP0300SB	25	40	50	800	5	4	2.2	110																																		
PP0640SB	58	77	150	800	5	4	2.2	60																																		
PP0720SB	65	88	150	800	5	4	2.2	60																																		
PP0800SB	75	98	150	800	5	4	2.2	60																																		
PP1100SB	90	130	150	800	5	4	2.2	60																																		
PP1300SB	120	160	150	800	5	4	2.2	40																																		
PP1500SB	140	180	150	800	5	4	2.2	40																																		
PP1800SB	160	220	150	800	5	4	2.2	40																																		
PP2300SB	190	260	150	800	5	4	2.2	30																																		
PP2600SB	220	300	150	800	5	4	2.2	30																																		
PP3100SB	275	350	150	800	5	4	2.2	30																																		
PP3500SB	300	400	150	800	5	4	2.2	30																																		
PP0640SC	58	77	150	800	5	4	2.2	120																																		
PP0720SC	65	88	150	800	5	4	2.2	120																																		
PP0800SC	75	98	150	800	5	4	2.2	120																																		
PP1100SC	90	130	150	800	5	4	2.2	120																																		
PP1300SC	120	160	150	800	5	4	2.2	80																																		
PP1500SC	140	180	150	800	5	4	2.2	80																																		
PP1800SC	160	220	150	800	5	4	2.2	80																																		
PP2300SC	190	260	150	800	5	4	2.2	60																																		
PP2600SC	220	300	150	800	5	4	2.2	60																																		
PP3100SC	275	350	150	800	5	4	2.2	60																																		
PP3500SC	300	400	150	800	5	4	2.2	60																																		


**DO-214AA**
**SURGE RATINGS**

SERIES	$I_{PP}$ 2 X 10 $\mu$ s AMPS	$I_{PP}$ 8 X 20 $\mu$ s AMPS	$I_{PP}$ 10 X 160 $\mu$ s AMPS	$I_{PP}$ 10 X 560 $\mu$ s AMPS	$I_{PP}$ 10 X 1000 $\mu$ s AMPS	$I_{TSM}$ 60 Hz AMPS	di/dt AMPS/ $\mu$ s (Note 1)	dv/dt V/ $\mu$ s (Note 1)
SA	150	150	100	50	50	20	500	2000
SB	300	300	150	100	80	32	500	2000
SC	500	400	200	200	100	60	500	2000

Note 1: Critical Rate of Rise for On-State Current (di/dt) and Off-State Voltage (dv/dt).

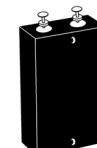
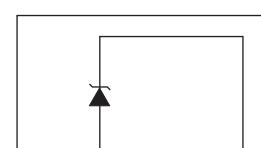
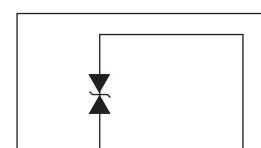
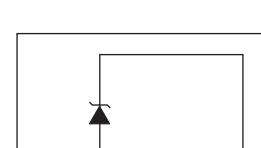
**MODULES - COMPONENTS (NOT ROHS COMPLIANT)**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{BR}$	CLAMPING VOLTAGE - $V_C$	CURRENT $I_{PP} @ 10/1000\mu s$ - A	LEAKAGE CURRENT - $\mu A @ V_{WM}$	POWER @ $10/1000\mu s$ - kW	PACKAGE
15KP17	17.0	18.9	32.3	464.0	5000	15	
<b>Not all voltages show for the 15KP Series. Please consult the factory for other voltages.</b>							
15KP280A	280.0	311.0	452.0	33.0	10	15	
15KPA17	17.0	18.9	32.3	464.0	5000	15	
<b>Not all voltages show for the 15KPA Series. Please consult the factory for other voltages.</b>							
15KPA280A	280.0	311.0	452.0	33.0	10	15	
30KPA30A	30.0	33.3	55.2	543.0	5000	30	
<b>Not all voltages show for the 30KPA Series. Please consult the factory for other voltages.</b>							
30KPA360A	360.0	400.0	640.0	55.0	10	30	
<b>Note:</b> Part numbers shown are unidirectional devices. Add a "CA" suffix to specify bidirectional devices, such as 15KP17CA.							
2700SM78CA	78.0	86.0	150.0	15K	10	2250	
60KS200C	180.0	200.0	335.0	47.0	10	60kW @ 1.2/50μs	
90KS200C	180.0	200.0	280.0	47.0	0.5	90kW @ 1.2/50μs	
704-15K36	31.5	36.0	53.0	300.0	100	15	
704-15K36T	31.5	36.0	53.0	300.0	500	15	
GPZ532	28.0	32.0	40.0	100*	50	2kW @ 50ms	
GPZ1275	28.0	32.0	55.0	500*	60	5kW @ 50ms	
<b>Note*:</b> $I_{PP} @ 1$ ms for GPZ Series.							
P15KP17	17.0	18.9	32.3	464.0	5000	15	
<b>Not all voltages show for the 15KP Series. Please consult the factory for other voltages.</b>							
P15KP280A	280.0	311.0	452.0	33.0	10	15	
P30KP30A	30.0	33.3	55.2	543.0	5000	30	
<b>Not all voltages show for the 15KPA Series. Please consult the factory for other voltages.</b>							
P30KP260A	260.0	289.0	416.0	72.0	10	30	
<b>Note:</b> Part numbers shown are unidirectional devices. Add a "CA" suffix to specify bidirectional devices, such as P15KP17CA.							

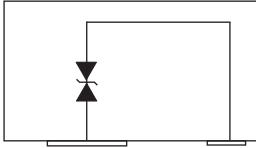
**MODULES - COMPONENTS (NOT ROHS COMPLIANT)**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{BR}$	CLAMPING VOLTAGE - $V_C$	CURRENT $I_{PP} @ 10/1000\mu s$ - A	LEAKAGE CURRENT - $\mu A @ V_{WM}$	POWER @ 10/1000 $\mu s$ - kW	PACKAGE
PHP8.4	12.0	14.0	22.0	341.0	250	7.5	
PHP24	34.0	40.0	67.0	112.0	250	7.5	
PHP30	42.5	50.0	84.0	90.0	250	7.5	
PHP60	85.0	100.0	167.0	90.0	250	15	
PHP120*	170.0	200.0	319.0	47.0	250	15	
PHP208	295.0	347.0	536.0	28.0	250	15	
PHP250*	354.0	418.0	652.0	23.0	250	15	
PHP440	623.0	735.0	1138.0	13.2	250	15	
PHP500*	708.0	835.0	1292.0	11.6	250	15	
PIP8.4	12.0	14.0	22.0	341.0	250	7.5	
PIP24	34.0	40.0	67.0	112.0	250	7.5	
PIP30	42.5	50.0	84.0	90.0	250	7.5	
PIP60	85.0	100.0	167.0	90.0	250	15	
PIP120*	170.0	200.0	319.0	47.0	250	15	
PIP208	295.0	347.0	536.0	28.0	250	15	
PIP250*	354.0	418.0	652.0	23.0	250	15	
PIP440	623.0	735.0	1138.0	13.2	250	15	
PIP500*	708.0	835.0	1292.0	11.6	250	15	

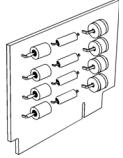
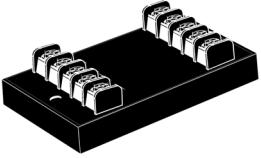
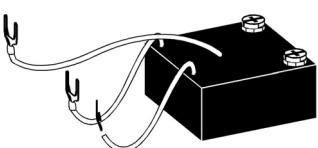
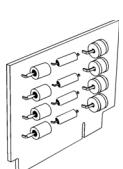
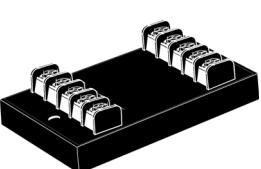
**Note:** PHP Series is typically used in Aerospace applications. PIP Series is typically used in Industrial applications. \*indicates marine applications.

SM3KW24A	24	26.7	43.0	69.8	3	3	 <b>DFN-2-3KW</b>
SM5KW10A	10	11.1	17.0	296.0	15	5	 <b>DFN-2-5KW</b>
SM5KW33A	33.0	36.8	53.3	94.0	8	5	
SM5KW36A	36.0	40.2	58.1	86.0	8	5	
SM15KPA17A	17.0	18.9	29.3	512.0	5000	15	
SM15KPA30A	30.0	33.3	50.7	296.0	15	15	
SM15KPA33A	33.0	36.7	54.8	274.0	10	15	
SM15KPA48A	48.0	53.3	77.7	193.0	10	15	
SM15KPA30CA	30.0	33.3	50.7	296.0	15	15	
SM15KPA43CA	43.0	47.8	69.7	215.0	10	15	
SM15KPA54CA	54.0	60.0	87.5	171.0	10	15	
SM15KPA58CA	58.0	64.4	94.0	160.0	10	15	
SM15KPA78CA	78.0	86.7	126.0	119.0	10	15	
SM15KPA220CA	220.0	245.0	356.0	42.0	10	15	
SM30KPA30A	30.0	33.3	55.2	543.0	5000	30	
SM30KPA36A	36.0	40.0	61.8	485.0	2000	30	
SM30KPA43A	43.0	47.8	73.0	410.0	1000	30	
SM30KPA48A	48.0	53.3	77.4	388.0	250	30	
SM30KPA58A	58.0	64.4	92.4	325.0	20	30	
SM30KPA64A	64.0	71.1	104.0	294.0	10	30	
SM30KPA75A	75.0	83.3	119.4	251.0	10	30	

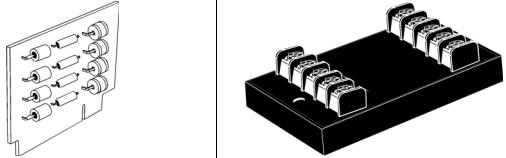
**MODULES - COMPONENTS (NOT ROHS COMPLIANT)**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	MIN. BREAKDOWN VOLTAGE - $V_{(BR)}$	CLAMPING VOLTAGE - $V_C$	CURRENT $I_{PP} @ 10/1000\mu s$ - A	LEAKAGE CURRENT - $\mu A @ V_{WM}$	POWER @ 10/1000 $\mu s$ - kW	PACKAGE
SM30KPA30CA	30.0	33.3	55.2	543.0	5000	30	
SM30KPA33CA	33.0	36.7	58.6	512.0	5000	30	
SM30KPA48CA	48.0	53.3	77.4	388.0	250	30	
SM30KPA58CA	58.0	64.4	92.4	325.0	20	30	

**MODULES - SURGEBUSTERS™(NOT ROHS COMPLIANT)**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	CLAMPING VOLTAGE - $V_C$ @ 8/20μS	MAX. CURRENT @ 8/20μS - kA/Line	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	SERIES RESISTANCE OHMS	CAPACITANCE pF	PACKAGE	
232B	±25	40.0 @ 500A	10	5	12	2000	 	
232E	±25	40.0 @ 500A	10	5	12	2000		
<b>Note:</b> Lines of protection: 2 pair.								
420E212	±12.0	22.0 @ 2kA	10	5	12	6000		
420E225	±25.0	44.0 @ 2kA	10	5	12	3000		
420E228	±28.0	46.0 @ 2kA	10	5	12	2800		
420E236	±36.0	60.0 @ 2kA	10	5	12	1500		
420E250	±50.0	80.0 @ 2kA	10	5	12	1200		
420E260	±60.0	95.0 @ 2kA	10	5	12	1000		
<b>Note:</b> Lines of protection: 1 pair.								
420LB28	±28.0	40.0 @ 2kA	10	5	12	2800	 	
420LB35	±35.0	60.0 @ 2kA	10	5	12	1500		
420LB60	±60.0	85.0 @ 2kA	10	5	12	1000		
420LE28	±28.0	40.0 @ 2kA	10	5	12	2800		
420LE35	±35.0	60.0 @ 2kA	10	5	12	1500		
420LE60	±60.0	85.0 @ 2kA	10	5	12	1000		
<b>Note:</b> Lines of protection: 2 pair.								
422B	±12.0	24.0 @ 500A	10	5	12	5000	 	
422E	±12.0	24.0 @ 500A	10	5	12	5000		
<b>Note:</b> Lines of protection: 2 pair.								
422ELC	±12.0	30.0 @ 500A	10	1	12	25		
485ELC	±7.0	20.0 @ 500A	10	10	12	25		
<b>Note:</b> Lines of protection: 2 pair.								
587B051	130.0 AC	350.0*	3*	1mA	-	-	 	
587B151	130.0 AC	350.0*	3*	1mA	-	-		
587B201	130.0 AC	350.0*	3*	1mA	-	-		
587B301	130.0 AC	350.0*	3*	1mA	-	-		
<b>Note:</b> Maximum Line Current: 5A, 15A, 20A, 30A.								
<b>Note*:</b> Line to Neutral.								
587B062	240.0 AC	800.0*	3*	1mA	-	-	 	
587B162	240.0 AC	800.0*	3*	1mA	-	-		
587B302	240.0 AC	800.0*	3*	1mA	-	-		
<b>Note:</b> Maximum Line Current: 6A, 16A, 30A.								
<b>Note*:</b> Line to Neutral.								
587B051LP	130.0 AC	330.0*	3*	1mA	-	-		
587B101LP	130.0 AC	330.0*	3*	1mA	-	-	 	
587B151LP	130.0 AC	330.0*	3*	1mA	-	-		
587B301LP	130.0 AC	330.0*	3*	1mA	-	-		
<b>Note:</b> Maximum Line Current: 5A, 10A, 15A, 30A.								
<b>Note*:</b> Line to Neutral.								
587B062LP	240.0 AC	800.0*	3*	1mA	-	-		
587B102LP	240.0 AC	800.0*	3*	1mA	-	-	 	
587B162LP	240.0 AC	800.0*	3*	1mA	-	-		
587B302LP	240.0 AC	800.0*	3*	1mA	-	-		
<b>Note:</b> Maximum Line Current: 6A, 10A, 16A, 30A.								
<b>Note*:</b> Line to Neutral.								
587B062LPE	240.0 AC	800.0*	3*	1mA	-	-		
587B102LPE	240.0 AC	800.0*	3*	1mA	-	-	 	
587B162LPE	240.0 AC	800.0*	3*	1mA	-	-		
587B302LPE	240.0 AC	800.0*	3*	1mA	-	-		
<b>Note:</b> Maximum Line Current: 6A, 10A, 16A, 30A.								
<b>Note*:</b> Line to Neutral.								

**MODULES - SURGEBUSTERS™(NOT ROHS COMPLIANT)**

PART NUMBER	STAND-OFF VOLTAGE - $V_{WM}$	CLAMPING VOLTAGE - $V_C$ @ 8/20μS	MAX. CURRENT @8/20μS - kA/Line	LEAKAGE CURRENT - $\mu A$ @ $V_{WM}$	SERIES RESISTANCE OHMS	CAPACITANCE pF	PACKAGE
TEL50B	±50.0	95.0 @ 500A	10	5	12	800	
TEL50E	±50.0	95.0 @ 500A	10	5	12	800	
TEL185B	±185.0	330.0 @ 500A	10	5	12	800	
TEL185E	±185.0	330.0 @ 500A	10	5	12	800	

**Note:** Lines of protection: 2 pair.

**ANALOG SWITCHES**

PART NUMBER	OPERATING VOLTAGE - Volts	ON RESISTANCE $R_{ON}$ - $\Omega$	CUT-OFF FREQUENCY MHz	OFF ISOLATION $O_{IRR}$ - db	TURN-ON TIME $t_{ON}$ - ns	TURN-OFF TIME $t_{OFF}$ - ns	CHANNEL-ON ( $C_{ON}$ ) CAPACITANCE - PF	CHANNEL-OFF ( $C_{OFF}$ ) CAPACITANCE - PF	CONFIGURATION	<b>PIN CONFIGURATION</b>
PA2011	1.8-3.3	3.5	60	-62	75	37	85	29	1 SPDT	<p>Top View <b>DFN-6</b></p> <p>Bottom View <b>SC70-6L</b></p>
PA2034	1.8-5.5	2	-	-55	20	13	67	14	4:1 MUX	<p>Top View <b>DFN-10</b></p> <p>Bottom View <b>DFN-10</b></p>
PA2070	2.7-4.2	7	400	-30	13	12	3.7	2.0	DPDT	<p>Top View <b>LoPRO™-10</b></p> <p>Bottom View <b>LoPRO™-10</b></p>
PA2222	1.8-4.2	0.6	100	-75	15	4	95	35	2 SPDT	<p>Top View <b>LoPRO™-10</b></p> <p>Bottom View <b>LoPRO™-10</b></p>
PA2222T	1.8-4.2	0.6	100	-75	15	4	95	35	2 SPDT	
PA2223	1.8-4.2	0.6	100	-75	15	4	95	35	2 SPDT	<p>Top View <b>LoPRO™-10</b></p> <p>Bottom View <b>LoPRO™-10</b></p>
PA2268	1.8-4.2	0.6	100	-75	15	4	95	35	2 SPDT	<p>Top View <b>LoPRO™-10</b></p> <p>Bottom View <b>LoPRO™-10</b></p>
PA2268T	1.8-4.2	0.6	100	-75	15	4	95	35	2 SPDT	
PA2312	1.8-4.2	0.6	100	-75	15	4	95	35	2 SPDT	<p>Top View <b>LoPRO™-10</b></p> <p>Bottom View <b>LoPRO™-10</b></p>

**ANALOG SWITCHES**

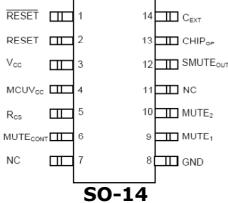
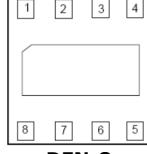
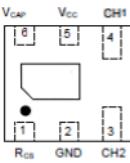
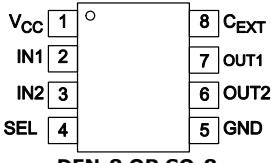
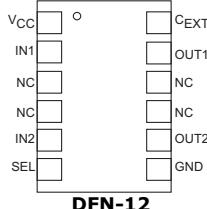
PART NUMBER	OPERATING VOLTAGE - Volts	ON RESISTANCE $R_{ON}$ - $\Omega$	CUT-OFF FREQUENCY MHz	OFF ISOLATION $O_{IRR}$ - db	TURN-ON TIME $t_{ON}$ - ns	TURN-OFF TIME $t_{OFF}$ - ns	CHANNEL-ON ( $C_{ON}$ ) CAPACITANCE - PF	CHANNEL-OFF ( $C_{OFF}$ ) CAPACITANCE - PF	CONFIGURATION	<b>PIN CONFIGURATION</b>
PA2535	1.8-5.5	0.35	60	-69	52	43	406	145	2 SPDT	<p><b>DFN-10</b></p>
PA2536	1.8-5.5	0.35	60	-69	52	43	406	145	2 SPDT	<p><b>DFN-10</b></p>
PA2983	2.7-4.2	7	1000	-30	13	12	3.7	2.0	1 DPDT	<p><b>LoPRO™-10</b></p>
PA3535	1.65-5.5	0.4	-	-69	52	43	406	145	2 SPDT	<p><b>TOP VIEW</b> <b>10 BUMP FLIP CHIP</b></p>
PA3536	1.65-5.5	0.4	-	-69	52	43	406	145	2 SPDT	<p><b>TOP VIEW</b> <b>10 BUMP FLIP CHIP</b></p>
PA4684	1.65-5.5	0.5	-	42	25	7	406	145	2 SPDT	<p><b>TOP VIEW</b> <b>10 BUMP FLIP CHIP</b></p>
PAUSB42	2.7-4.2	7	1000	-30	13	12	3.7	2.0	1 DPDT	<p><b>LoPRO-10</b></p>

## LED DRIVERS

PART NUMBER	OPERATING VOLTAGE - Volts	SWITCHING FREQUENCY - mphz	MAX DUTY CYCLE - %	SWITCH CURRENT LIMIT - mA	MAXIMUM FEEDBACK VOLTAGE - Volts	CHANNELS	PIN CONFIGURATION
PA5026	2.5-5.5	25	-	2-80	-	16	 <b>SSOP-24</b>
PA5026QN	2.5-5.5	25	-	2-80mA	-	16	 <b>QFN-24</b>
PA5110	4.5-20	1.2	90	320	10	1	 <b>SOT-23-6</b>
PA5910	2.5-6.5	2.0	90	20mA-2A	260mV	1	 <b>SO-8</b>

## HIGH VOLTAGE LED DRIVERS

PART NUMBER	OPERATING VOLTAGE - Volts	SHUTDOWN SUPPLY CURRENT - mA	CURRENT SENSE THRESHOLD - mV	OSCILLATOR FREQUENCY @ 150 OHMS R <sub>osc</sub> KHZ	PWN DUTY CYCLE	PIN CONFIGURATION
PA5711	11-480	1.3	280	200	100	 <b>QFN-16</b>

AUDIO-PUNKS																																						
PART NUMBER	OPERATING VOLTAGE - Volts	ATTENUATION dB	MAXIMUM CURRENT mA	ON RESISTANCE $R_{ON}$ - $\Omega$	TOTAL HARMONIC DISTORTION - %	CROSSTALK - dB	VRMS - Volts	PIN CONFIGURATION																														
PA4101	2.7-5.5	36	500	-	-	-	0.7	 <p>SO-14</p> <table border="1"> <tr><td>RESET</td><td>1</td><td>14</td><td><math>C_{EXT}</math></td></tr> <tr><td>RESET</td><td>2</td><td>13</td><td><math>CHIP_{SP}</math></td></tr> <tr><td><math>V_{CC}</math></td><td>3</td><td>12</td><td><math>SMUTE_{OUT}</math></td></tr> <tr><td><math>MCUV_{CC}</math></td><td>4</td><td>11</td><td>NC</td></tr> <tr><td><math>R_{CS}</math></td><td>5</td><td>10</td><td><math>MUTE_2</math></td></tr> <tr><td><math>MUTE_{cont}</math></td><td>6</td><td>9</td><td><math>MUTE_1</math></td></tr> <tr><td>NC</td><td>7</td><td>8</td><td>GND</td></tr> </table>	RESET	1	14	$C_{EXT}$	RESET	2	13	$CHIP_{SP}$	$V_{CC}$	3	12	$SMUTE_{OUT}$	$MCUV_{CC}$	4	11	NC	$R_{CS}$	5	10	$MUTE_2$	$MUTE_{cont}$	6	9	$MUTE_1$	NC	7	8	GND		
RESET	1	14	$C_{EXT}$																																			
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$MUTE_{cont}$	6	9	$MUTE_1$																																			
NC	7	8	GND																																			
PA4201	1.5-2.7	45	500	0.55	0.02	-100	0.7	 <p>DFN-8</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr><td>8</td><td>7</td><td>6</td><td>5</td></tr> </table>	1	2	3	4	8	7	6	5																						
1	2	3	4																																			
8	7	6	5																																			
PA4220	1.5-5.0	-	150	3	0.02	-	3.5	 <p>DFN-6/SO-8</p> <table border="1"> <tr><td><math>V_{CAP}</math></td><td>1</td><td><math>V_{CC}</math></td><td>2</td><td>CH1</td><td>3</td></tr> <tr><td></td><td>6</td><td></td><td>5</td><td></td><td>4</td></tr> <tr><td></td><td>1</td><td></td><td>2</td><td></td><td>3</td></tr> <tr><td></td><td></td><td><math>R_{CS}</math></td><td></td><td>GND</td><td>CH2</td></tr> </table>	$V_{CAP}$	1	$V_{CC}$	2	CH1	3		6		5		4		1		2		3			$R_{CS}$		GND	CH2						
$V_{CAP}$	1	$V_{CC}$	2	CH1	3																																	
	6		5		4																																	
	1		2		3																																	
		$R_{CS}$		GND	CH2																																	
PA4401	9.0-12.0	-	5	0.8	0.02	-100	2	 <p>DFN-8 OR SO-8</p> <table border="1"> <tr><td><math>V_{CC}</math></td><td>1</td><td>O</td><td>8</td><td><math>C_{EXT}</math></td></tr> <tr><td>IN1</td><td>2</td><td></td><td>7</td><td>OUT1</td></tr> <tr><td>IN2</td><td>3</td><td></td><td>6</td><td>OUT2</td></tr> <tr><td>SEL</td><td>4</td><td></td><td>5</td><td>GND</td></tr> </table>	$V_{CC}$	1	O	8	$C_{EXT}$	IN1	2		7	OUT1	IN2	3		6	OUT2	SEL	4		5	GND										
$V_{CC}$	1	O	8	$C_{EXT}$																																		
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IN2	3		6	OUT2																																		
SEL	4		5	GND																																		
PA4402	12	-	5	3.8	1	-	3	 <p>DFN-12</p> <table border="1"> <tr><td><math>V_{CC}</math></td><td>1</td><td>O</td><td>8</td><td><math>C_{EXT}</math></td></tr> <tr><td>IN1</td><td>2</td><td></td><td>7</td><td>OUT1</td></tr> <tr><td>NC</td><td>3</td><td></td><td>6</td><td>NC</td></tr> <tr><td>NC</td><td>4</td><td></td><td>5</td><td>NC</td></tr> <tr><td>IN2</td><td>5</td><td></td><td>4</td><td>OUT2</td></tr> <tr><td>SEL</td><td>6</td><td></td><td>3</td><td>GND</td></tr> </table>	$V_{CC}$	1	O	8	$C_{EXT}$	IN1	2		7	OUT1	NC	3		6	NC	NC	4		5	NC	IN2	5		4	OUT2	SEL	6		3	GND
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NC	3		6	NC																																		
NC	4		5	NC																																		
IN2	5		4	OUT2																																		
SEL	6		3	GND																																		

AUDIO-CODEC								
PART NUMBER	OPERATING VOLTAGE - Volts	SAMPLING LEVEL @ 24 bits - KHZ	SIGNAL NOISE RATIO - dB	TOTAL HARMONIC DISTORTION + NOISE - dB	SPEAKER AMPLIFIER OUTPUT mW	HP AMPLIFIER OUTPUT mW	PLAYBACK mW	PACKAGE
PA5155	1.7-3.3	8-96	96	-83	-	40	7	QFN-28
<b>Features:</b> I2S or SPI Interface, Fractional PLL, Master/Slave Serial Port, I2S Left Justified DSP/PCM Mode, Stereo Enhancement								
PA5322	3.0-5.5	8-200	95	-90	-	-	-	SSOP-28
<b>Features:</b> 10k $\Omega$ Input Impedance, 2VRMS Analog Input Level, I2S or 2-Wire Interface, 4 to 1 MUX Analog Inputs, Digital Volume Control UO to 120dB, I2S Left/Right Justified Mode, ADC PGA 11.5dB to -11.5dB								
PA5331	1.8-3.3	8-96	96	-85	-	40	7-16	QFN-28
<b>Features:</b> I2S or SPI Interface, 3 to 1 MUX Analog Inputs, Master/Slave Serial Port, I2S Left Justified DSP/PCM Mode, Stereo Enhancement								

**AUDIO-CODEC**

PART NUMBER	OPERATING VOLTAGE - Volts	SAMPLING LEVEL @ 24 bits - KHZ	SIGNAL-NOISE RATIO	TOTAL HARMONIC DISTORTION + NOISE - dB	SPEAKER AMPLIFIER OUTPUT mW	HP AMPLIFIER OUTPUT mW	PLAYBACK mW	PACKAGE
PA5388	1.8-3.3	8-96	96	-85	-	40	7-16	QFN-28
<b>Features:</b> I2S or SPI Interface, 3 to 1 MUX Analog Inputs, Master/Slave Serial Port, I2S Left Justified DSP/PCM Mode, Stereo Enhancement								
PA5750	1.8-3.3	8-96	92	-85	500	40	-	QFN-32
<b>Features:</b> I2S/SPI Interface, Headphone Detector, Master/Slave Serial Port, I2S Left Justified DSP/PCM Mode, Stereo Enhancement								

**AUDIO-DAC**

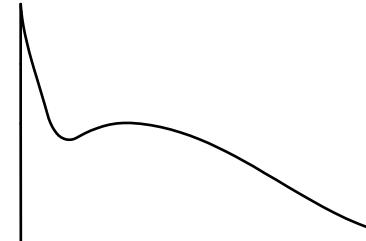
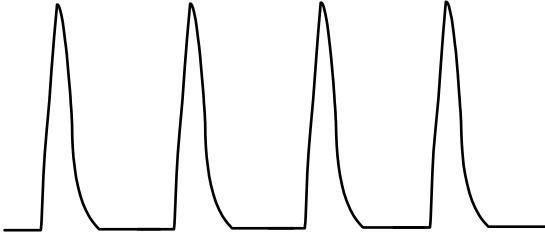
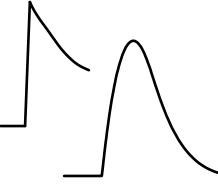
PART NUMBER	OPERATING VOLTAGE - Volts	SAMPLING LEVEL @ 24 bits - KHZ	SIGNAL-NOISE RATIO	TOTAL HARMONIC DISTORTION + NOISE - dB	SPEAKER AMPLIFIER OUTPUT mW	HP AMPLIFIER OUTPUT mW	PLAYBACK mW	PACKAGE
PA5134	4.5-5.5	200	95	-85	120	3.5	SO-8	
PA5134LV	3.0-5.0	200	95	-85	120	3.5	SO-8	
PA5144	4.5-5.5	200	95	-85	120	3.5	TSSOP-10	
PA5144LV	3.0-5.5	200	95	-85	120	3.5	TSSOP-10	
<b>Features:</b> Line Amplifier, I2S Interface								

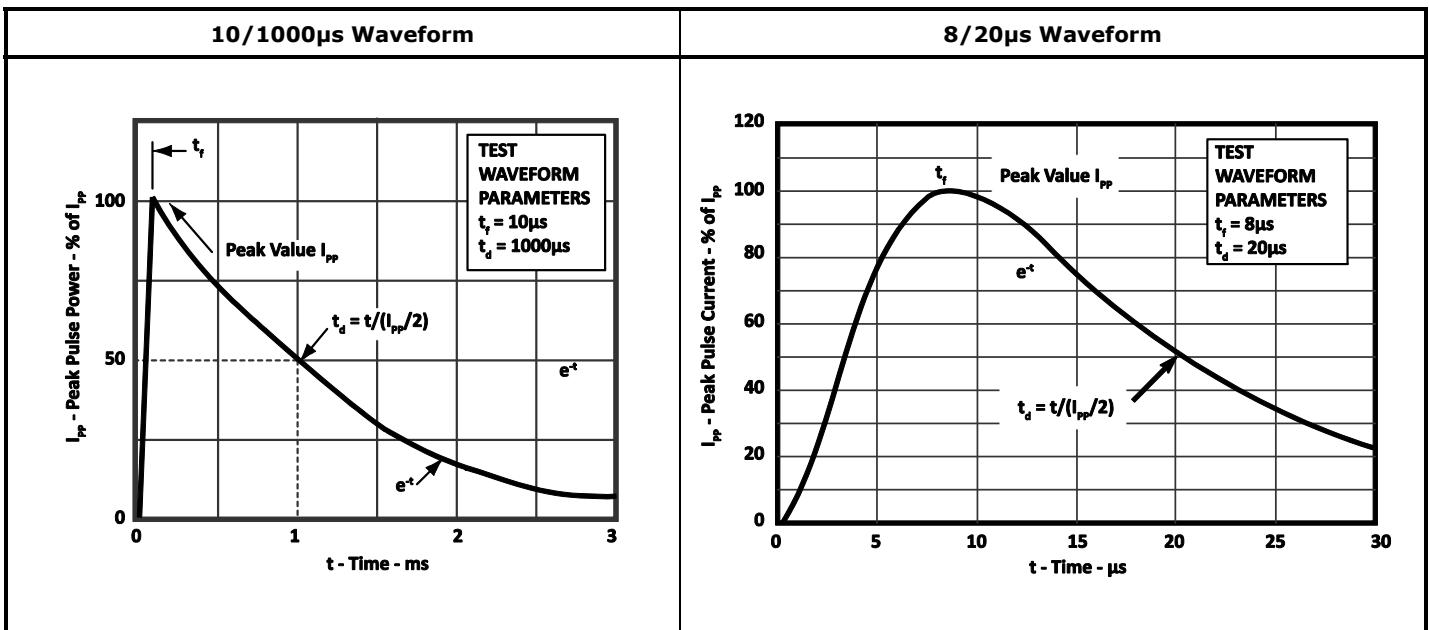
**AUDIO-ADC**

PART NUMBER	OPERATING VOLTAGE - Volts	SAMPLING LEVEL @ 24 bits - KHZ	SIGNAL-NOISE RATIO	TOTAL HARMONIC DISTORTION + NOISE - dB	SPEAKER AMPLIFIER OUTPUT mW	HP AMPLIFIER OUTPUT mW	PLAYBACK mW	PACKAGE
PA5240	3.0-5.5	200	98	-85	20	1	SO-8	TSSOP-16
<b>Features:</b> I2S, 12 Bit Interface								

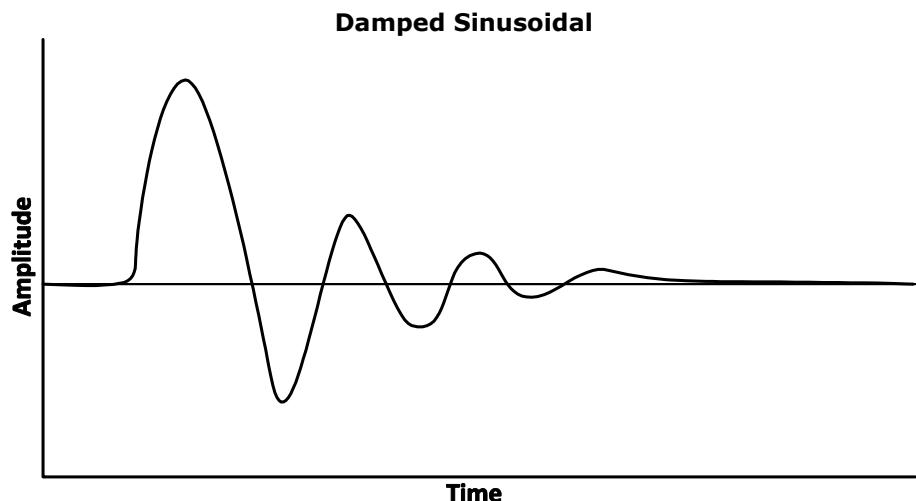
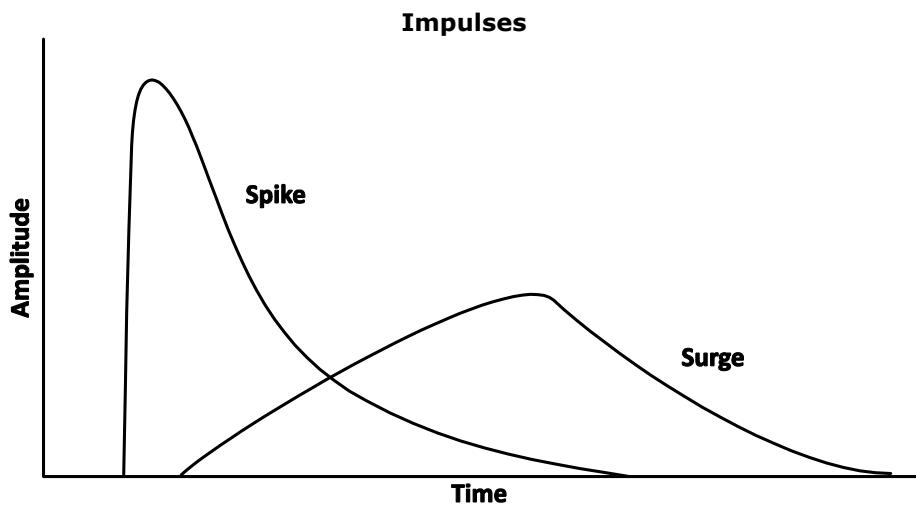
**AUDIO-FM TRANSMITTER**

PART NUMBER	OPERATING FREQUENCY - mph	CHANNEL SEPARATION - dB	PILOT MODULATION %	TOTAL HARMONIC DISTORTION - %	SUPPLY VOLTAGE Volts	INPUT GAIN - dB	SUB CARRIER REJECTION - dB	PRE-EMPHASIS TC $\mu$ s	TX OUTPUT - dB $\mu$ V	QUICENT CURRENT mA	PACKAGE
PA1418	70-120	40	15	0.01	4-6	0	30	50	99	18	TSSOP-24
<b>Features:</b> Stabilized PLL											

International Standard	Environmental Threat	Transient Characteristics	Test Waveform
61000-4-2	ESD	Super Fast < 1ns Low Energy	
61000-4-4	EFT	Fast 5 ns Medium Energy (per burst)	
61000-4-5	Surge	Surge 10-700 $\mu$ s High Energy	



## IMPULSE WAVE FORMS – UNIVERSAL WAVESHAPES



Peak Pulse Current (Amplitude)

$I_t = I_{PP} = 10, 100, 1000$  Amp

Pulse Duration (Time) – Spike

$t_d = 30\text{ns}$  (ESD)

Pulse Duration (Time) – Transient

$t_d = 20$  or  $1000\mu\text{s}$  (Lightning)

Pulse Duration (Time) – Surge

$t_d = 100\text{ms}$  (Switching)

# PRODUCT PACKAGING SCALED 1"-1" Nominal



**0402/U0402**  
Width: 0.019" (0.48)  
Length: 0.039" (1.00)  
Height: 0.016" (0.41)  
LD Pitch: N/A  
Pad Count: 2



**0404**  
Width: 0.039" (1.00)  
Length: 0.039" (1.00)  
Height: 0.016" (0.41)  
LD Pitch: 0.020" (0.50)  
Pad Count: 4



**0406**  
Width: 0.039" (1.00)  
Length: 0.059" (1.50)  
Height: 0.016" (0.41)  
LD Pitch: 0.020" (0.50)  
Pad Count: 6



**0408/U0408**  
Width: 0.039" (1.00)  
Length: 0.079" (2.00)  
Height: 0.016" (0.41)  
LD Pitch: 0.020" (0.50)  
Pad Count: 8



**5 Bump FC**  
Width: 0.038" (0.97)  
Length: 0.052" (1.32)  
Height: 0.016" (0.41)  
LD Pitch: 0.020" (0.50)  
Pad Count: 5



**10 Bump FC**  
Width: 0.059" (1.50)  
Length: 0.079" (2.00)  
Height: 0.019" (0.47)  
LD Pitch: 0.009" (0.24)  
Pad Count: 10



**CS0406**  
Width: 0.040" (1.02)  
Length: 0.060" (1.52)  
Height: 0.009" (0.23)  
LD Pitch: 0.020" (0.50)  
Pad Count: 6



**CDIP-16**  
Width: 0.47" (11.94)  
Length: 0.90" (22.86)  
Height: 0.192" (4.83)  
LD Pitch: 0.100" (2.54)  
Pin Count: 16



**DFN-2-0201**  
Width: 0.012" (0.30)  
Length: 0.025" (0.64)  
Height: 0.012" (0.30)  
LD Pitch: N/A  
Pad Count: 2



**DFN-2-0402**  
Width: 0.024" (0.61)  
Length: 0.040" (1.02)  
Height: 0.018" (0.46)  
LD Pitch: N/A  
Pad Count: 2



**DFN-2-3KW**  
Width: 0.22" (5.59)  
Length: 0.25" (6.35)  
Height: 0.05" (1.27)  
LD Pitch: 0.168" (4.27)  
Pad Count: 2



**DFN-2-5KW**  
Width: 0.25" (6.35)  
Length: 0.30" (7.62)  
Height: 0.05" (1.27)  
LD Pitch: 0.189" (4.80)  
Pad Count: 2



**DFN-4**  
Width: 0.040" (1.02)  
Length: 0.040" (1.02)  
Height: 0.020" (0.50)  
LD Pitch: N/A  
Pad Count: 4



**DFN-6**  
Width: 0.059" (1.50)  
Length: 0.077" (1.96)  
Height: 0.019" (0.48)  
LD Pitch: 0.020" (0.50)  
Pad Count: 6



**DFN-8**  
Width: 0.079" (2.00)  
Length: 0.079" (2.00)  
Height: 0.031" (0.80)  
LD Pitch: 0.020" (0.50)  
Pad Count: 8



**DFN-8LP**  
Width: 0.063" (1.60)  
Length: 0.079" (2.00)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pad Count: 8



**DFN-10**  
Width: 0.101" (2.57)  
Length: 0.101" (2.57)  
Height: 0.019" (0.48)  
LD Pitch: 0.020" (0.50)  
Pad Count: 10



**DFN-12**  
Width: 0.063" (1.60)  
Length: 0.118" (3.00)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pad Count: 12



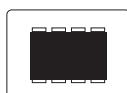
**DFN-16**  
Width: 0.063" (1.60)  
Length: 0.158" (4.00)  
Height: 0.031" (0.79)  
LD Pitch: 0.020" (0.50)  
Pad Count: 16



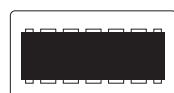
**DFN-16LP**  
Width: 0.063" (1.60)  
Length: 0.158" (4.00)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pad Count: 16



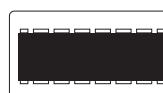
**DFN-16SLP**  
Width: 0.051" (1.30)  
Length: 0.158" (3.30)  
Height: 0.021" (0.53)  
LD Pitch: 0.020" (0.50)  
Pad Count: 16



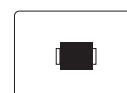
**DIP-8**  
Width: 0.250" (6.35)  
Length: 0.39" (9.91)  
Height: 0.160" (4.06)  
LD Pitch: 0.100" (2.54)  
Pin Count: 8



**DIP-14**  
Width: 0.250" (6.35)  
Length: 0.740" (18.80)  
Height: 0.160" (4.06)  
LD Pitch: 0.100" (2.54)  
Pin Count: 14



**DIP-16**  
Width: 0.250" (6.35)  
Length: 0.755" (19.18)  
Height: 0.160" (4.06)  
LD Pitch: 0.100" (2.54)  
Pin Count: 16



**DO-214AA**  
Width: 0.17" (4.32)  
Length: 0.14" (3.56)  
Height: 0.089" (2.25)  
LD Pitch: N/A  
Pin Count: 2

# PRODUCT PACKAGING SCALED 1"-1" Nominal



**E0503**  
Width: 0.030" (0.76)  
Length: 0.050" (1.27)  
Height: 0.030" (0.76)  
LD Pitch: N/A  
Pad Count: 2



**LoPro™**  
Width: 0.051" (1.30)  
Length: 0.063" (1.60)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pad Count: 10



**Quad/Penta**  
Width: 0.039" (1.00)  
Length: 0.059" (1.50)  
Height: 0.016" (0.40)  
LD Pitch: 0.020" (0.50)  
Pad Count: 6



**QFN-16**  
Width: 0.118" (3.00)  
Length: 0.118" (3.00)  
Height: 0.030" (0.76)  
LD Pitch: 0.020" (0.50)  
Pad Count: 16



**QFN-24**  
Width: 0.16" (4.00)  
Length: 0.16" (4.00)  
Height: 0.030" (0.75)  
LD Pitch: 0.020" (0.50)  
Pad Count: 24



**QFN-28**  
Width: 0.16" (4.00)  
Length: 0.16" (4.00)  
Height: 0.030" (0.75)  
LD Pitch: 0.020" (0.50)  
Pad Count: 28



**QFN-32**  
Width: 0.20" (5.00)  
Length: 0.20" (5.00)  
Height: 0.035" (0.90)  
LD Pitch: 0.020" (0.50)  
Pad Count: 32



**SC-70-5L**  
Width: 0.050" (1.27)  
Length: 0.079" (2.00)  
Height: 0.035" (0.89)  
LD Pitch: 0.025" (0.64)  
Pin Count: 5



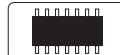
**SC-70-6L**  
Width: 0.050" (1.27)  
Length: 0.079" (2.00)  
Height: 0.035" (0.89)  
LD Pitch: 0.025" (0.64)  
Pin Count: 6



**SC-79**  
Width: 0.032" (0.81)  
Length: 0.046" (1.17)  
Height: 0.024" (0.61)  
LD Pitch: N/A  
Pin Count: 2



**SO-8**  
Width: 0.192" (4.90)  
Length: 0.15" (3.81)  
Height: 0.061" (1.55)  
LD Pitch: 0.050" (1.270)  
Pin Count: 8



**SO-14**  
Width: 0.15" (3.81)  
Length: 0.34" (8.63)  
Height: 0.061" (1.55)  
LD Pitch: 0.050" (1.27)  
Pin Count: 14



**SO-16**  
Width: 0.15" (3.81)  
Length: 0.390" (9.90)  
Height: 0.061" (1.55)  
LD Pitch: 0.050" (1.27)  
Pin Count: 16



**SO-16WB**  
Width: 0.295" (7.50)  
Length: 0.405" (10.30)  
Height: 0.097" (2.46)  
LD Pitch: 0.050" (1.27)  
Pin Count: 16



**SOD-323**  
Width: 0.051" (1.30)  
Length: 0.69" (1.75)  
Height: 0.037" (0.94)  
LD Pitch: N/A  
Pin Count: 2



**SOD-923**  
Width: 0.024" (0.60)  
Length: 0.031" (0.79)  
Height: 0.015" (0.37)  
LD Pitch: N/A  
Pin Count: 2



**SOT-143**  
Width: 0.051" (1.30)  
Length: 0.115" (2.92)  
Height: 0.039" (1.00)  
LD Pitch: 0.075" (1.90)  
Pin Count: 4



**SOT-23**  
Width: 0.051" (1.30)  
Length: 0.115" (2.92)  
Height: 0.039" (1.00)  
LD Pitch: 0.037" (0.95)  
Pad Count: 3



**SOT-23-6**  
Width: 0.065" (1.65)  
Length: 0.115" (2.92)  
Height: 0.047" (1.19)  
LD Pitch: 0.037" (0.95)  
Pin Count: 6



**SOT-543**  
Width: 0.047" (1.19)  
Length: 0.063" (1.60)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pin Count: 4



**SOT-553**  
Width: 0.047" (1.19)  
Length: 0.063" (1.60)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pin Count: 5



**SOT-563**  
Width: 0.047" (1.19)  
Length: 0.063" (1.60)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pin Count: 6



**SOT-563**  
Width: 0.047" (1.19)  
Length: 0.063" (1.60)  
Height: 0.022" (0.55)  
LD Pitch: 0.020" (0.50)  
Pin Count: 6



**SOT-883**  
Width: 0.024" (0.50)  
Length: 0.039" (1.00)  
Height: 0.018" (0.45)  
LD Pitch: 0.014" (0.36)  
Pin Count: 3



**SOT-953**  
Width: 0.031" (0.79)  
Length: 0.039" (1.00)  
Height: 0.018" (0.46)  
LD Pitch: 0.015" (0.38)  
Pin Count: 5

**PRODUCT PACKAGING  
SCALED 1"-1"  
Nominal**



**SOT-963**  
Width: 0.031" (0.79)  
Length: 0.039" (1.00)  
Height: 0.018" (0.46)  
LD Pitch: 0.015" (0.38)  
Pin Count: 6



**SSOP-24**  
Width: 0.15" (3.90)  
Length: 0.34" (8.65)  
Height: 0.06" (1.45)  
LD Pitch: 0.050" (1.27)  
Pin Count: 24



**SSOP-28**  
Width: 0.21" (5.30)  
Length: 0.40" (10.20)  
Height: 0.07" (1.75)  
LD Pitch: 0.050" (1.27)  
Pin Count: 28



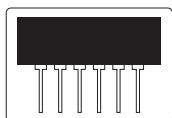
**TSSOP-10**  
Width: 0.12" (3.00)  
Length: 0.12" (3.00)  
Height: 0.04" (0.85)  
LD Pitch: 0.026" (0.66)  
Pin Count: 10



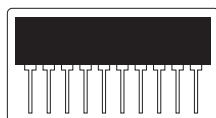
**TSSOP-16**  
Width: 0.17" (4.40)  
Length: 0.20" (5.00)  
Height: 0.04" (0.90)  
LD Pitch: 0.026" (0.66)  
Pin Count: 16



**TSSOP-24**  
Width: 0.17" (4.40)  
Length: 0.31" (7.8)  
Height: 0.05" (1.09)  
LD Pitch: 0.026" (0.66)  
Pin Count: 24



**VSIP-6**  
Width: 0.250" (6.35)  
Length: 0.780" (19.18)  
Height: 0.130" (3.30)  
LD Pitch: 0.100" (2.54)  
Pin Count: 6



**VSIP-10**  
Width: 0.250" (6.35)  
Length: 1.020" (25.90)  
Height: 0.110" (2.79)  
LD Pitch: 0.100" (2.54)  
Pin Count: 10



## **COMPANY INFORMATION**

### **COMPANY PROFILE**

ProTek Devices, based in Tempe, Arizona USA, is a manufacturer of Transient Voltage Suppression (TVS) products designed specifically for the protection of electronic systems from the effects of lightning, Electrostatic Discharge (ESD), Nuclear Electromagnetic Pulse (NEMP), inductive switching and EMI/RFI. With over 20 years of engineering and manufacturing experience, ProTek offers application specific protection solutions for any type of electronic equipment or system.

ProTek Devices Analog Products Division, also manufactures analog interface, control, RF and power management products.

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