

PJSDC15

TVS DIODE ARRAY FOR ESD PROTECTION OF 12V DATA AND POWER LINES

FEATURES

- 300 watts peak pulse power ($t_p=8/20\mu s$)
- 40 watts peak pulse power ($t_p=10/1000\mu s$)
- Transient protection for data and power lines to IEC 61000-4-2 (ESD) + 15kV (air), + 8kV (HBM)
- Protects one bidirectional line
- Low clamping voltage
- Low leakage current
- High surge capability
- Solid-state silicon avalanche technology
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

Case : SOT-23, Plastic

Terminals : Solderable per MIL-STD-750, Method 2026

Approx. Weight : 0.0084 grams

Marking : C15

COMMON CATHODE

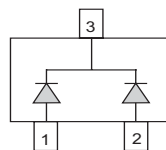
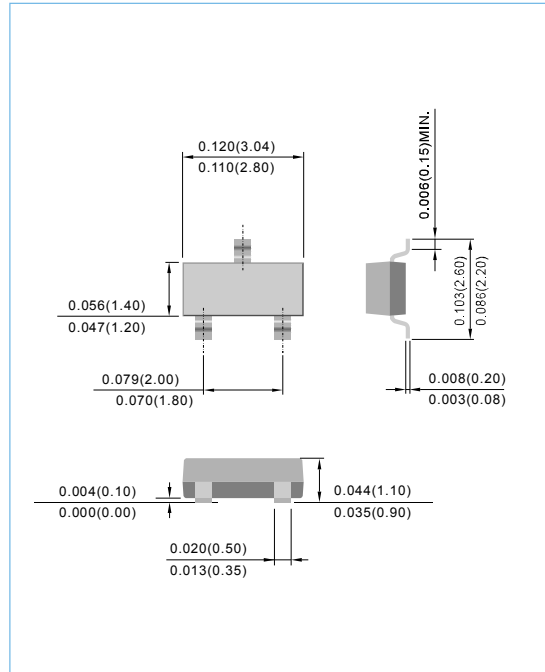


FIG.16

SOT-23

Unit: inch (mm)



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PK}	300	W
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	10	A
Non-Repetitive Peak Forward Current ($t_p=100\mu s$)	I_{FSMAX}	4	A
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}C/W$
Lead Soldering Temperature	T_L	260 (10 sec.)	$^{\circ}C$
Operating Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to + 150	$^{\circ}C$



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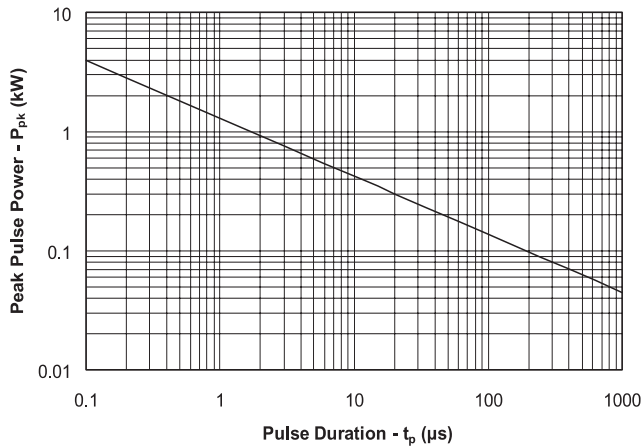
ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MIN.	MAX.	UNIT
Reverse Stand-Off Voltage		V_{RWM}	-	12.8	V
Reverse Breakdown Voltage	$I_T=1mA$, Between Pin 1 and 2 (each direction)	V_{BR}	14.3	16.4	V
Reverse Leakage Current	$V_{RWM}=12.8V, T=25^{\circ}C$ Between Pin 1 and 2 (each direction)	I_R	-	100	nA
Forward Voltage	$I_F=100mA$, Pin 1 to 3 and Pin 2 to 3	V_F	-	1.3	V
Temperature Coefficient of V_{BR}		αV_{BR}	-	12	mV/ $^{\circ}C$
Clamping Voltage	$I_{PP}=1.9A$, $t_p=8/20\mu s$ Between Pin 1 and 2 (each direction)	V_C	-	21.2	V
Junction Capacitance	$V_R=0V, f=1MHz$ Pin 1 to 2	C_J	-	120	pF

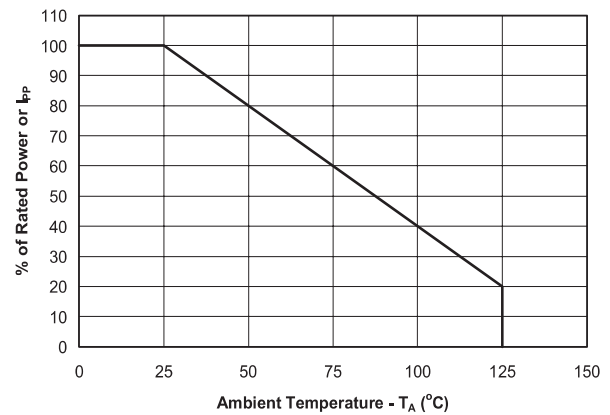
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Typical Characteristics

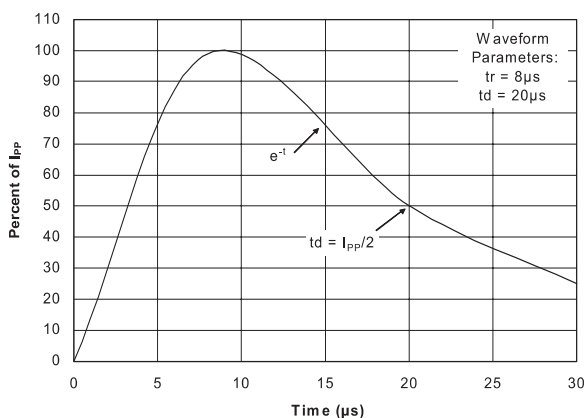
Non-Repetitive Peak Pulse Power vs. Pulse Time



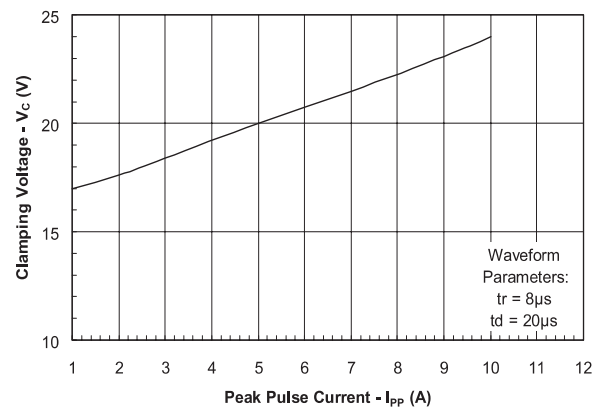
Power Derating Curve



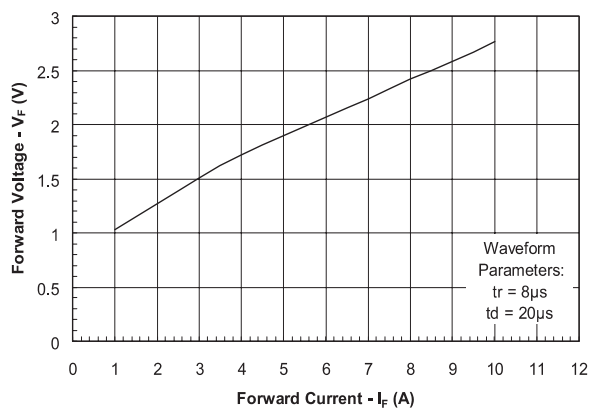
Pulse Waveform



Clamping Voltage vs. Peak Pulse Current



Forward Voltage vs. Forward Current

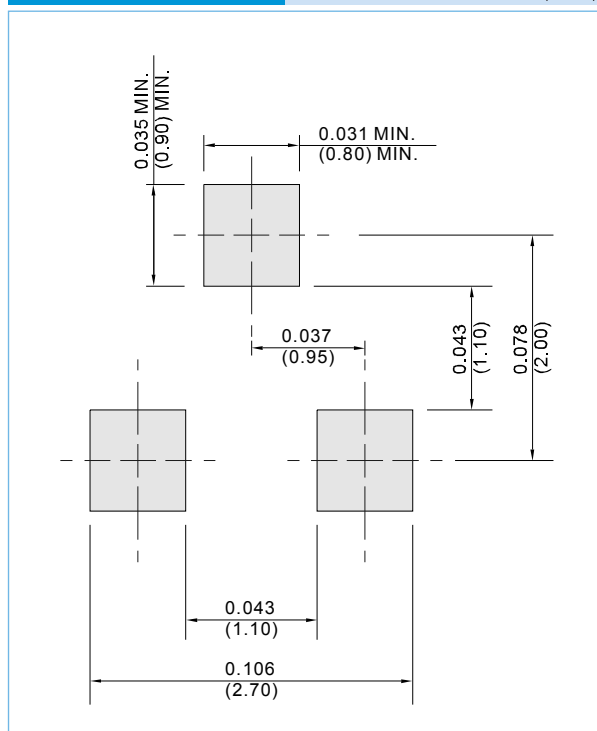


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MOUNTING PAD LAYOUT

SOT-23

Unit: inch (mm)



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel