



#### **BI-DIRECTIONAL ESD PROTECTION DIODE**

This bi-directional TVS has been designed to protect sensitive equipment against ESD and to prevent Latch-Up events in CMOS circuitry operating at 3.3Vdc and below. This offers an integrated solution to protect a single data line where the board space is a premium.

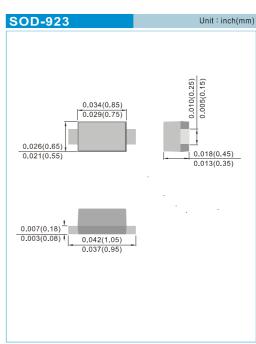
#### **SPECIFICATION FEATURES**

- 50W Power Dissipation (8/20µs Waveform)
- Low Leakage Current, Maximum of 2.5μA@3.3Vdc
- Very low Clamping voltage
- IEC 61000-4-2 ESD ± 15kV air, ± 8kV Contact Compliance
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00002 ounces, 0.0005grams
- Case : SOD-923, Plastic
- Marking: O

#### **APPLICATIONS**

- Video I/O ports protection
- Set Top Boxes
- Portable Instrumentation





#### MAXIMUM RATINGS (TA=25°C unless otherwise noted)

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (8/20 μs Waveform)	Ppp	50	W
Peak Pulse Current (8/20 μs Waveform)	I ррм	3	А
IEC61000-4-2 Contact	Vesd	<u>+</u> 8	kV
IEC61000-4-2 Air	Vesd	<u>+</u> 15	kV
Operating Junction and Storage Temperature Range	Т <sub>J</sub> ,Тsтg	-55 to +150	°C

#### ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	Vrwm		-	-	3.3	V
Reverse Breakdown Voltage	VBR	I BR=1mA	5.4	-	7.0	V
Reverse Leakage Current	l R	VR=3.3V	-	-	2.5	μА
Clamping Voltage (8/20ms)	Vc	IPP=3A	-	14	16.6	V
Off State Junction Capacitance	Сı	0 Vdc Bias f=1MHz	-	13	-	pF

May 4,2016-REV.01 PAGE . 1





#### **CHARACTERISTIC CURVES**

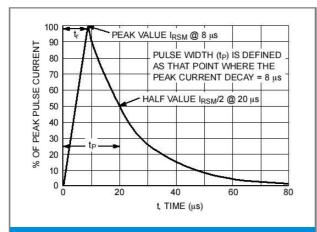


Fig.1 8X20us Pulse Waveform

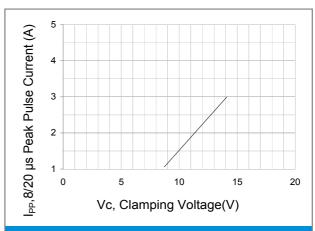
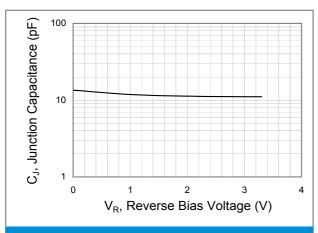


Fig.2 Typical Peak Clamping Voltage



**Fig.3 Typical Junction Capacitance** 

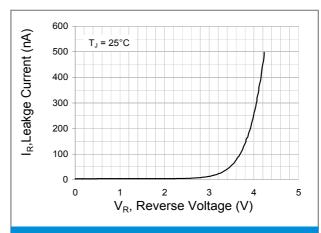
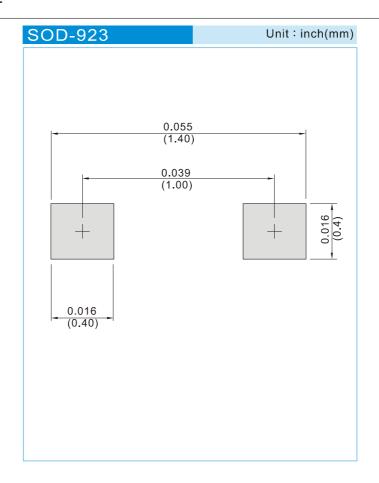


Fig.4 Typical Reverse Characteristics





#### **MOUNTING PAD LAYOUT**



#### **ORDER INFORMATION**

• Packing information

T/R - 8K per 7" plastic Reel





### Part No\_packing code\_Version

PJSD03LCTM\_R1\_00001

# For example : RB500V-40\_R2\_00001 Part No. Serial number Version code means HF Packing size code means 13"

Packing Code XX			Version Code XXXXX			
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	Α	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	В	13"	2			
Tube Packing (T/P)	Т	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

Packing type means T/R





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