



Micro Commercial Components



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ESD3V3D9

ESD Protection Device

Features

- Halogen free available upon request by adding suffix "-HF"
For sensitive ESD protection
Excellent clamping capability
Low leakage
ESD rating of class 3(>16KV)per Human Body Mode
Fast response ,response time less than 1ns.
Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
Epoxy meets UL 94 V-0 flammability rating
Moisture Sensitivity Level 1

Maximum Ratings

- Operating Junction &StorageTemperature: -55°C to +150°C

Table with 5 columns: Parameter, Symbol, Limits, unit. Rows include IEC61000-4-2(ESD) Air Contact, ESD Voltage per human body mode, and Peak Pulse Power(8/20us).

Pin Configuration-Top View

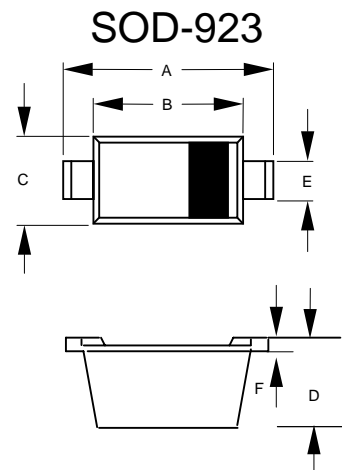
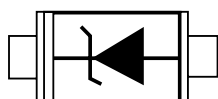
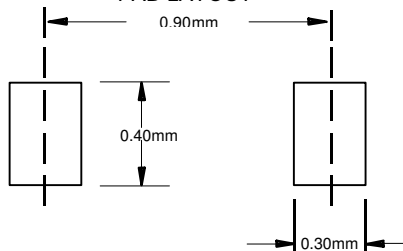


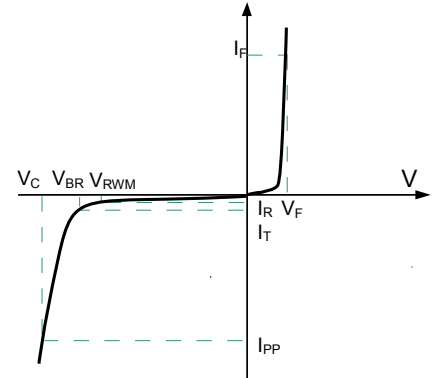
Table with 5 columns: DIM, INCHES (MIN, MAX), MM (MIN, MAX), NOTE. Rows A-F correspond to dimensions in the diagram.

SUGGESTED SOLDER PAD LAYOUT



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
C	Capacitance @ $V_R=0$ and $f=1\text{MHz}$



Electrical characteristics per line @ 25 °C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	5			V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}$		0.005	1	μA
Forward Voltage	V_F	$I_F = 10\text{mA}$		0.8		V
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ $t_p = 8/20\mu\text{S}$			5.8	V
Clamping Voltage	V_C	$I_{PP} = 5\text{A}$ $t_p = 8/20\mu\text{S}$			8.8	V
Junction Capacitance	C_j	$V_R = 0\text{V}$ $f = 1\text{MHz}$		35	50	pF
Junction Capacitance	C_j	$V_R = 2.5\text{V}$ $f = 1\text{MHz}$		20	27	pF

Typical Characteristics

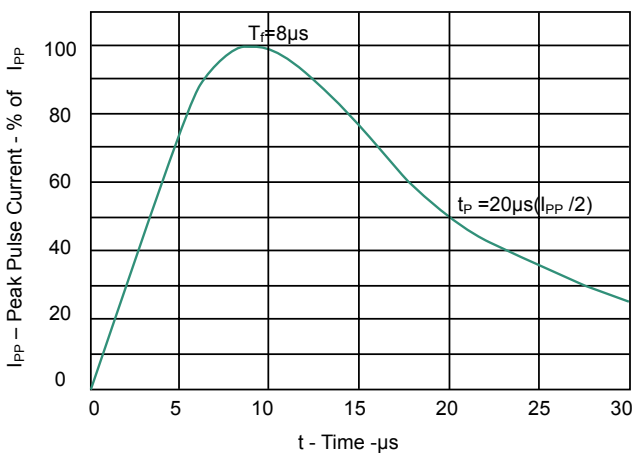


Fig 1.Pulse Waveform

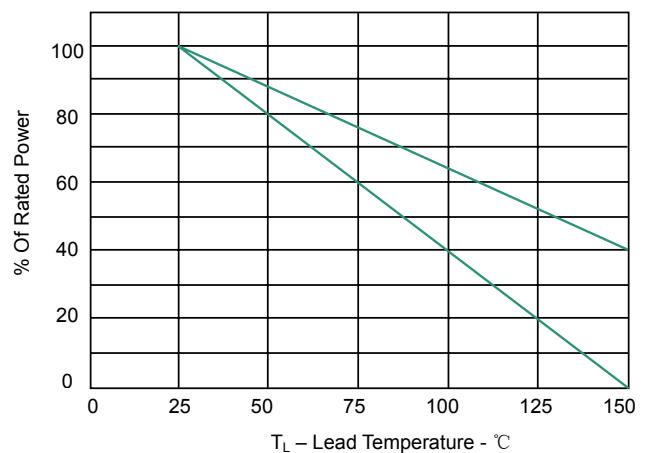


Fig 2.Power Derating Curve



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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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