

### SURFACE MOUNT SWITCHING DIODE

This device is an extremely fast switching diode housed in the ultra-small SOD-523 package. Ideal for applications

### FEATURES

- Extremely fast reverse recovery time to reduce switching losses
- · Very low capacitance for reduced insertion losses
- Reverse voltage rating of 80V
- Also available in lead-free plating (100% matte tin finish)
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std..(Halogen Free)

#### **MECHANICAL DATA**

- Case: SOD-523, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- · Polarity : Color band denotes cathode end
- Approx.Weight : 0.0014 ounces, 0.0001 grams
- Marking : 14

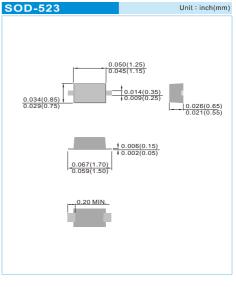
### MAXIMUM RATINGS $T_J = 25^{\circ}C$ UNLESS OTHERWISE NOTED

PARAMETER	SYMBOL	LIMITS	UNITS
Peak Reverse Voltage	Vrm	90	V
Continuous Reverse Voltage	VR	80	V
Continuous Forward Current	١F	225	mA
Non-repetitive Peak Forward Current , t = 0.001ms, Square Wave	I FSM	4	А
Total Power Dissipation (Note1)	P <sub>tot</sub>	200	mW
Operating Junction and Storage Temperature Range	Тј,Тѕтс	-55 to 150	°C

Note 1. FR-5 Board 1.0 x 0.75 x 0.062 in

#### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	LIMITS	UNITS
Thermal Resistance, Junction to Ambient	Rθ <sub>JA</sub>	625	°C / W



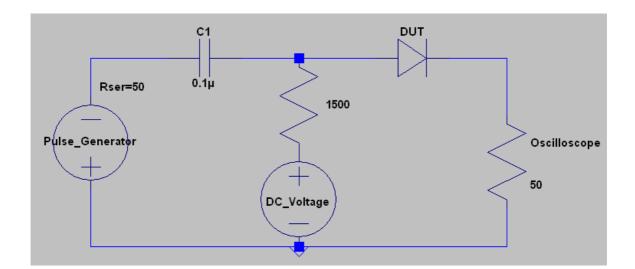




### ELECTRICAL CHARACTERISTICS $\,T_{\rm J}$ = 25°C UNLESS OTHERWISE NOTED

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Forward Voltage (Note 2)	VF	I F = 100mA	-	-	1.2	V
Reverse Leakage Current	Ir	VR = 80V	-	-	0.1	μΑ
Junction Capacitnace	Ср	0Vdc Bias, f = 1MHz	-	3	-	pF
Reverse Recovery Time (See Figure 1)	I II	$I_F = 10mA$ , $I_R = 10mA$ $R_L = 100 Ohms;$ measured at I rrec = 1mA	-	-	4.0	ns

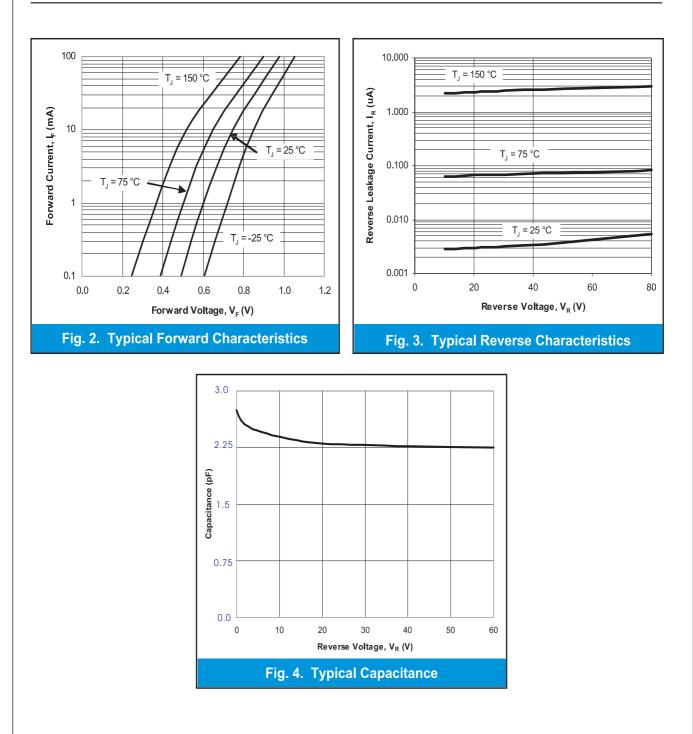
#### Note 2. Short duration pulse test to avoid self-heating effect



### Figure 1. Reverse Recovery Time Equivalent Test Circuit



### **TYPICAL CHARACTERISTIC CURVES**

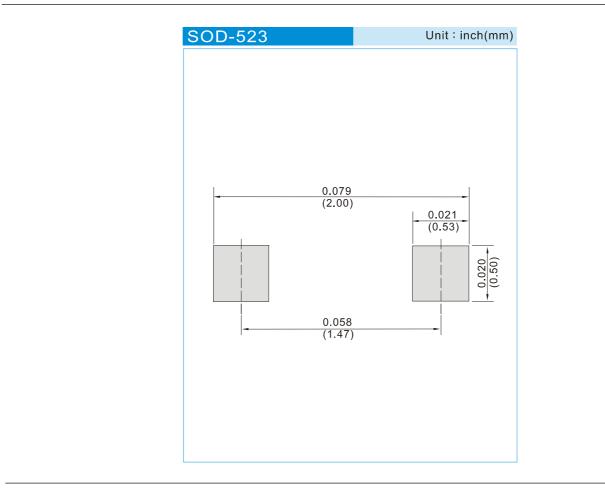


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#### MOUNTING PAD LAYOUT



#### **ORDER INFORMATION**

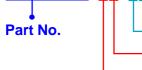
- Packing information
  - T/R 12K per 13" plastic Reel
  - T/R 5K per 7" plastic Reel





### For example :





- Serial number

Version code means HF

- Packing size code means 13"
- Packing type means T/R

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)	A	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			





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