



1SS400G

SURFACE MOUNT SWITCHING DIODE

This device is an extremely fast switching diode housed in the ultra-small SOD-723 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)
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

Case: SOD-723, Plastic

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

Polarity: See Diagram Below

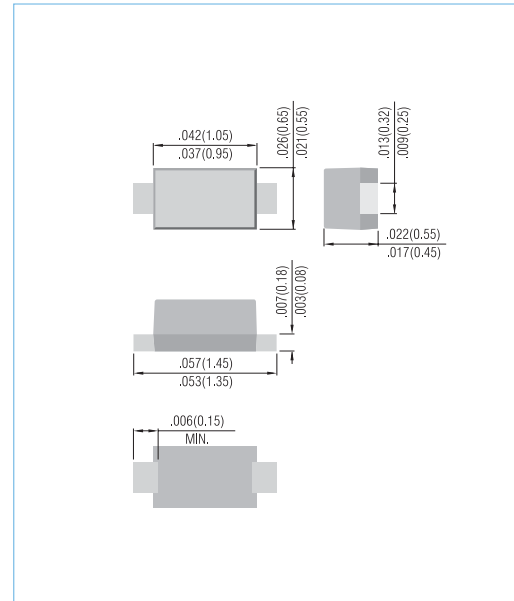
Approx.Weight : 0.00077 gram

Marking : BE

Polarity : Color band cathode

SOD-723

Unit: inch (mm)



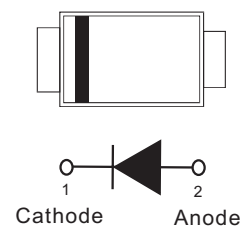
MAXIMUM RATINGS $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED

PARAMETER	SYMBOL	LIMITS	UNITS
Peak Reverse Voltage	V_{RM}	90	V
Continuous Reverse Voltage	V_R	80	V
Continuous Forward Current	I_F	225	mA
Non-repetitive Peak Forward Current , $t = 0.01\text{ms}$, Square Wave	I_{FSM}	4	A
Total Power Dissipation (Note1)	P_{TOT}	200	mW
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$

Note 1. FR-4 Board 70 x 60 x 1mm

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	LIMITS	UNITS
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C} / \text{W}$



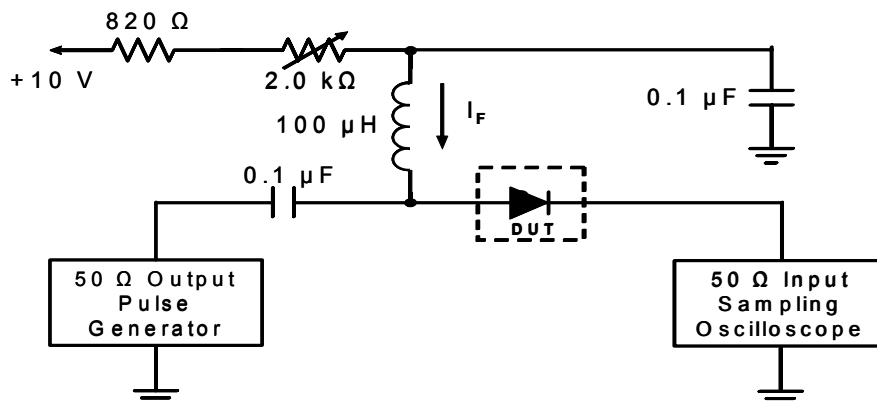


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ELECTRICAL CHARACTERISTICS $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Forward Voltage (Note 2)	V_F	$I_F = 100\text{mA}$	-	-	1	V
Reverse Leakage Current	I_R	$V_R = 80\text{V}$	-	-	0.1	μA
Junction Capacitance	C_D	0.5Vdc Bias, $f = 1\text{MHz}$	-	0.7	3	pF
Reverse Recovery Time (See Figure 1)	T_{RR}	$I_F = 10\text{mA}$, $I_R = 10\text{mA}$ $R_L = 100\ \Omega$; measured at $I_{R(\text{rec})} = 1\text{mA}$	-	-	4.0	ns

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



- Notes: 1. A 2.0k Ω variable resistor adjusted for a forward current (I_F) to 10mA
2. Input pulse is adjusted to $I_{R(\text{peak})}$ is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT



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TYPICAL CHARACTERISTIC CURVES

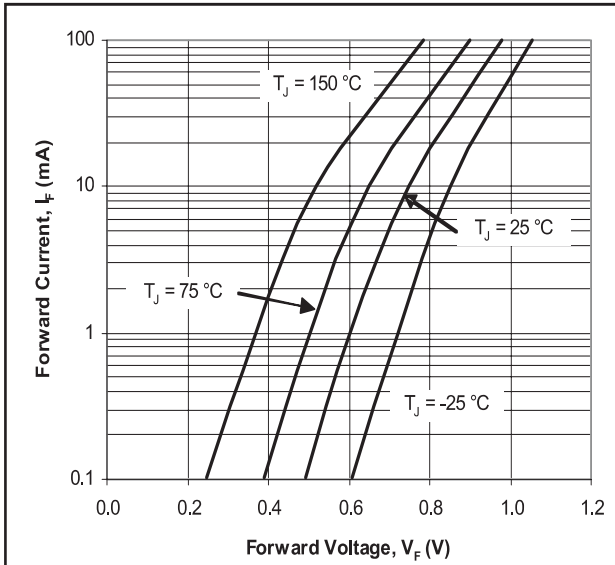


Fig. 2. Typical Forward Characteristics

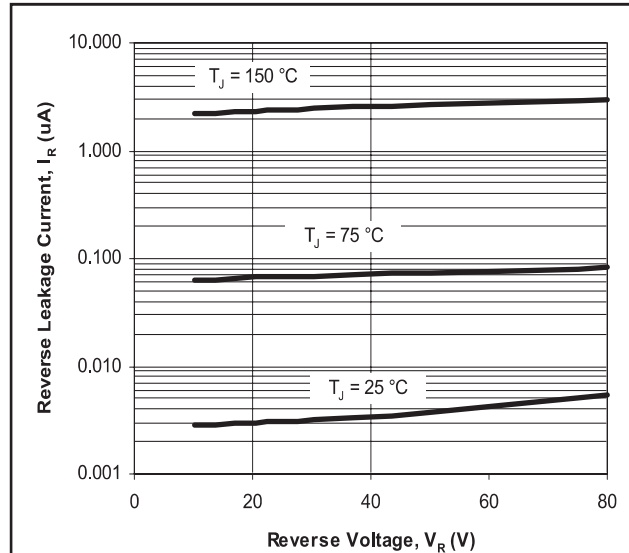


Fig. 3. Typical Reverse Characteristics

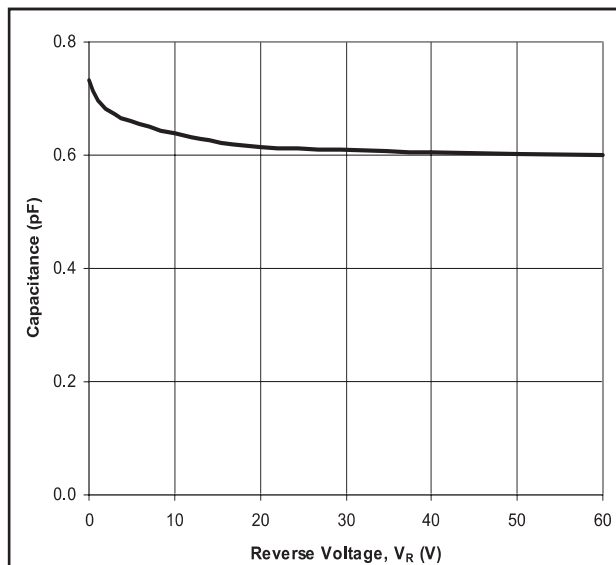


Fig. 4. Typical Capacitance

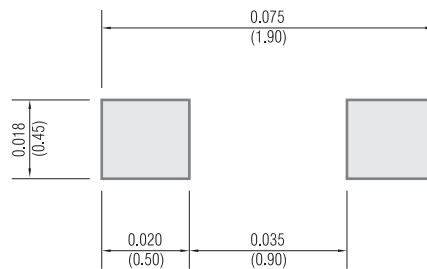


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MOUNTING PAD LAYOUT

SOD-723

Unit: inch (mm)



ORDER INFORMATION

- Packing information

T/R - 8K per 7" plastic Reel

LEGAL STATEMENT

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