

Surface Mount Schottky Barrier Rectifier

(Pb) Lead(Pb)-Free

Features:

- * Low Forward Voltage Drop.
- * Guard Ring Construction for Transient Protection.
- * High Conductance.

Description:

- * Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0.
- * Moisture Sensitivity: Level 1 per J-STD-020C.
- * Terminals: Solderable per MIL-STD-202, Method 208.
- * Polarity: Cathode Band.
- * Marking: SE
- * Weight: 0.004 grams (approximate).

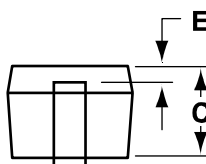
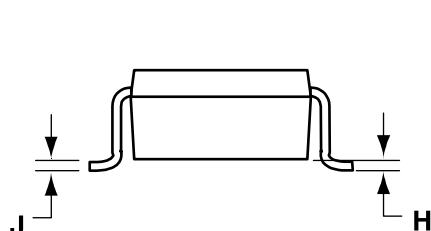
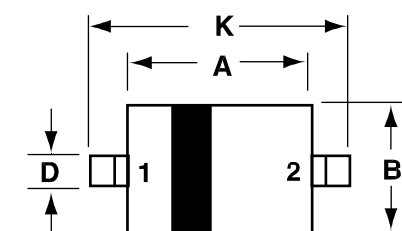
**SMALL SIGNAL
SCHOTTKY DIODES
500m AMPERES
30 VOLTS**



SOD-323

SOD-323 Outline Demensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15 REF	
H	0.00	0.10
J	0.089	0.177
K	2.30	2.70

PIN 1.CATHODE
2.ANODE

Maximum Ratings @ $T_A = 25^\circ\text{C}$ Unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	Values	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current	I_O	0.5	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	2	A
Power Dissipation (Note 1)	P_d	235	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	426	$^\circ\text{C/W}$
Operating Temperature Range	T_J	+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-40 to +125	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (Note 2) $I_R = 500\mu\text{A}$	$V_{(BR)R}$	30	-	-	V
Forward Voltage Drop (Note 2) $I_F = 0.1\text{A}$ $I_F = 0.5\text{A}$	V_F	-	- 0.40	0.36 0.45	V
Leakage Current (Note 2) $V_R = 15\text{V}$ $V_R = 20\text{V}$ $V_R = 30\text{V}$	I_R	-	-	80 100 500	μA
Junction Capacitance $f = 1\text{MHz}, V_R = 0\text{V}$	C_T	-	58	-	pF

Note: 1. Part mounted on FR-4 PC board with recommended pad layout.

2. Short duration test pulse used to minimize self-heating effect.

3. No purposefully added lead.

Electrical characteristic curves ($T_A=25^\circ\text{C}$)

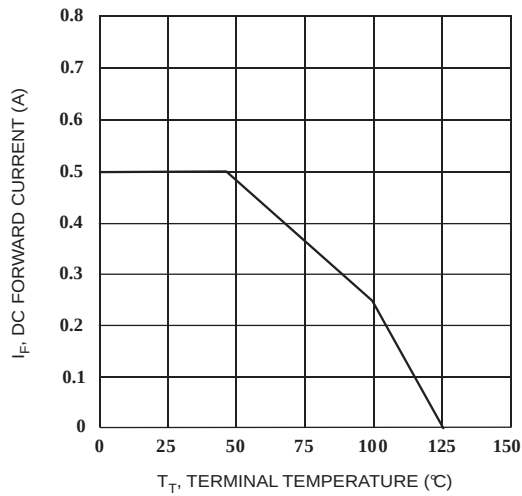


FIG.1 FORWARD CURRENT DERATING CURVE

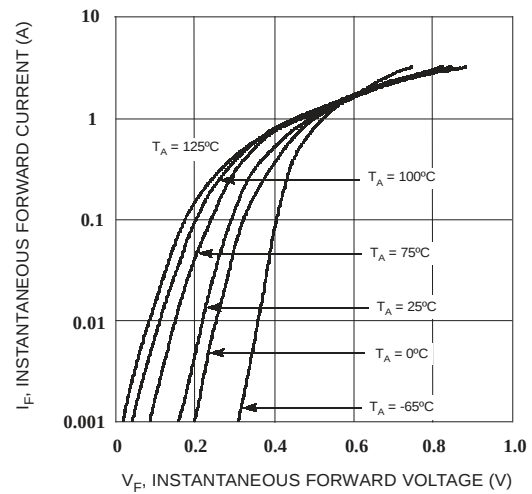


FIG.2 TYPICAL FORWARD CHARACTERISTICS

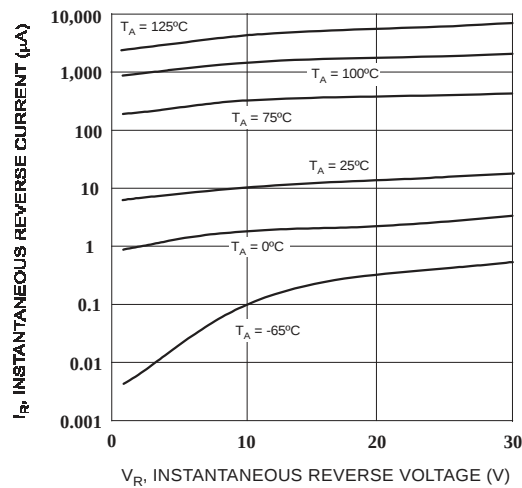


FIG.3 TYPICAL REVERSE CHARACTERISTICS

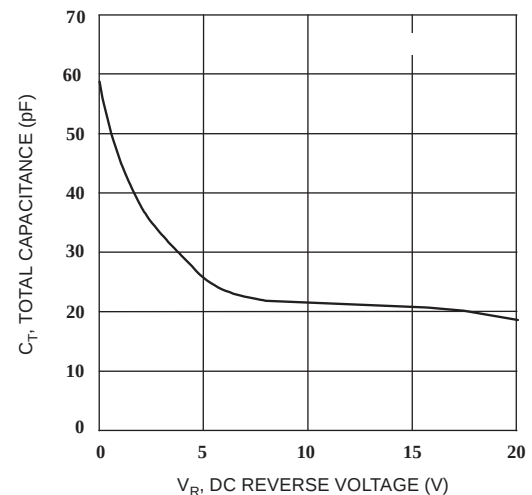


FIG.4 TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

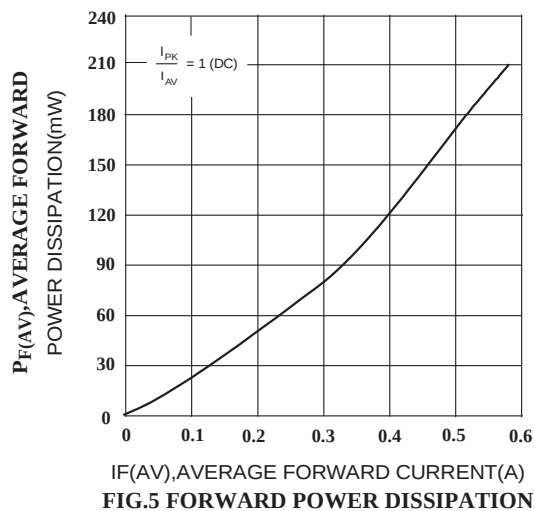


FIG.5 FORWARD POWER DISSIPATION

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