

SCHOTTKY BARRIER DIODE

FEATURES

- ◆ Low Forward Voltage Drop
- ◆ Guard Ring Construction for Transient Protection
- ◆ High Conductance
- ◆ Also Available in Lead Free Version
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SOD-323
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 5.48mg / 0.00019oz

Pinning

1.Cathode	2.Anode
	
SOD-323	

Marking Code

B0520WS	SD
B0530WS	SE
B0540WS	SF

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter		Symbols	B0520WS	B0530WS	B0540WS	Units
Peak Repetitive Reverse Voltage		V_{RRM}	20	30	40	V
RMS reverse voltage		V_{RMS}	14	21	28	V
Working Peak Reverse Voltage		V_{DC}	20	30	40	V
Maximum Average Forward Current at Ta=25°C		I_o	0.5			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load(JEDEC method)		I_{FSM}	22			A
Maximum Instantaneous Forward Voltage	$I_F=0.1\text{ A}$	V_F	0.33	0.36	-	V
	$I_F=0.5\text{ A}$		0.39	0.45	0.51	
	$I_F=1\text{ A}$		-	-	0.62	
Reverse current	$V_R=10V$	I_R	75	-	-	uA
	$V_R=15V$		-	75	-	
	$V_R=20V$		250	100	10	
	$V_R=30V$		-	500	-	
	$V_R=40V$		-	-	20	
Thermal Resistance, Junction to Ambient Air		$R_{\theta JA}$	500			°C/W
Junction temperature		T_j	-55 ~ +125			°C
Storage temperature		T_{stg}	-55 ~ +150			°C

Fig.1 Forward Current Derating Curve

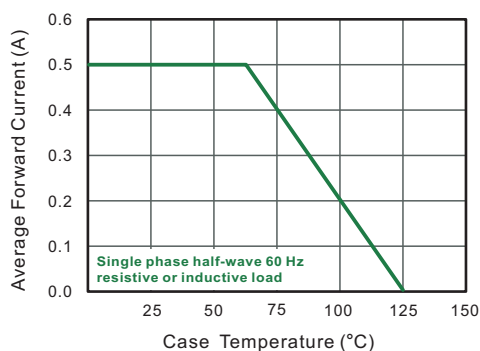


Fig.2 Typical Reverse Characteristics

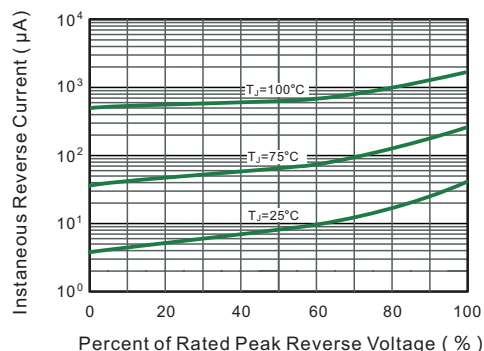


Fig.3 TYPICAL FORWARD VOLTAGE

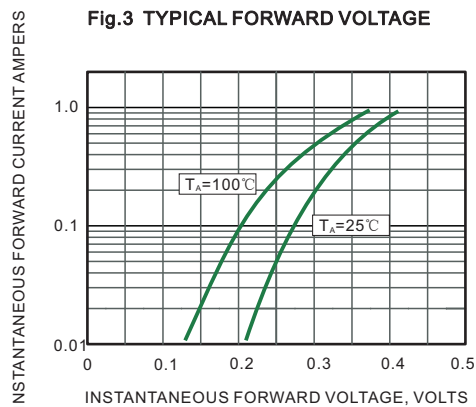


Fig.4 Typical Junction Capacitance

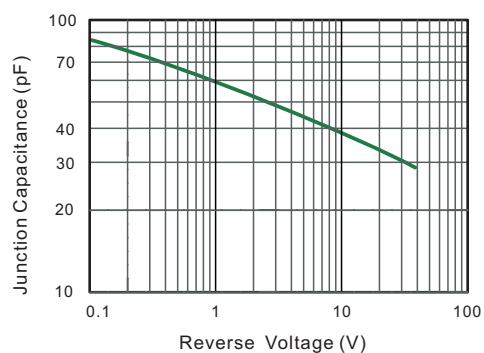


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

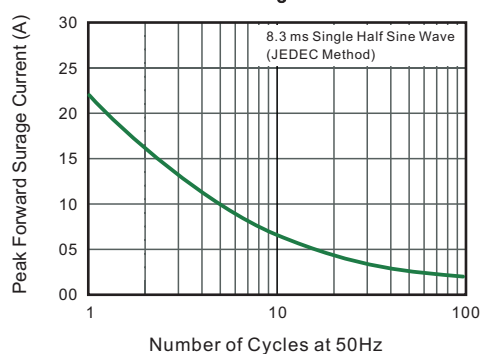
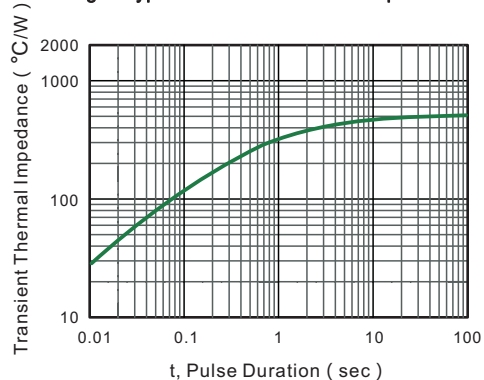


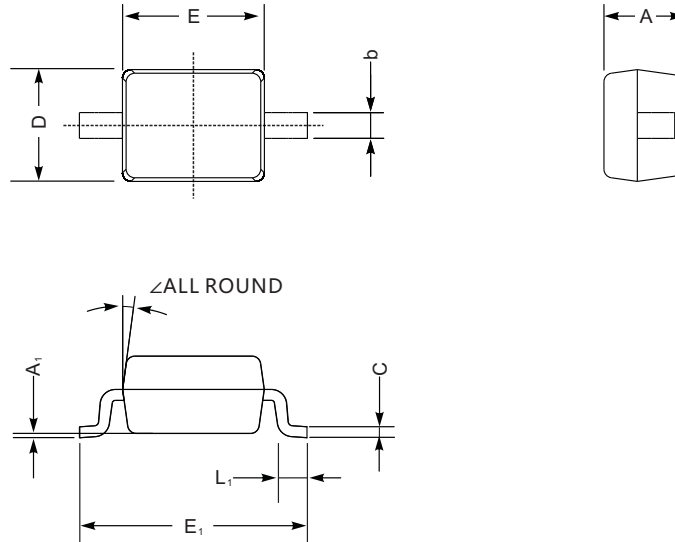
Fig.6 Typical Transient Thermal Impedance



Package Outline

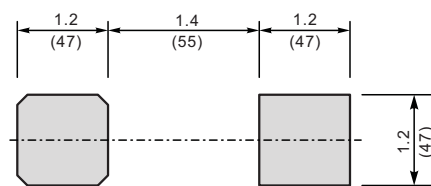
SOD-323

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

The recommended mounting pad size



Unit: $\frac{\text{mm}}{(\text{mil})}$

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOD-323	Tape/Reel, 7" reel	3000	EIA-481-1