

0.5AMP Surface Mount Schottky Barrier Rectifiers

Features

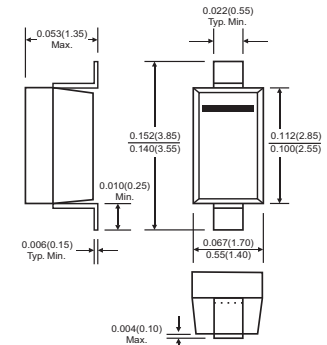
- ✧ Low power loss, high efficiency.
- ✧ Guard ring construction for transient protection
- ✧ High conductance

Mechanical Data

- ✧ Case: SOD-123, plastic
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Marking: B0520LW----SD
B0530W----SE
B0540W----SF



SOD-123



Maximum Ratings at 25°C ambient temperature unless otherwise specified

Type Number	Symbol	B0520LW	B0530W	B0540W	Units
Peak Repetitive Reverse Voltage	VRRM	20	30	40	V
Working Peak Reverse Voltage	VRWM				
DC Blocking Voltage	VR				
RMS Reverse Voltage	VR(RMS)	14	21	28	V
Average Rectified Current @ TL=100 °C	Io	0.5			A
Non-repetitive Peak Forward Surge Current 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method)	IFSM	5.5			A
Power Dissipation (Note 1)	Pd	410			mW
Thermal Resistance Junction to Ambient Air (Note 1)	RθJA	244			°C /W
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 125			°C
Voltage Rate of Chang	dv / dt	1000			V/uS

Electrical Characteristics

Type Number	Symbol	B0520LW	B0530W	B0540W	Units
Minimum Reverse Breakdown Voltage IR=250uA IR=130uA IR=20uA	V(BR)	20 - -	- 30 -	- - 40	V
Maximum Reverse Leakage Current (Note 2) VR=10V TJ=25 °C VR=15V TJ=25 °C VR=20V TJ=25 °C VR=30V TJ=25 °C VR=40V TJ=25 °C VR=10V TJ=100 °C VR=20V TJ=100 °C VR=40V TJ=100 °C	IR	75 - 250 - - 5.0 8.0	- 20 - 130 - - -	- - 10 - 20 - 5.0 13	uA mA
Maximum Forward Voltage Drop (Note 2) Tj=25 °C IF=0.1A Tj=25 °C IF=0.5A Tj=25 °C IF=1.0A Tj=100 °C IF=0.1A Tj=100 °C IF=0.5A Tj=100 °C IF=1.0A	VF	0.300 0.385 - 0.220 0.330	0.375 0.430 - - -	- 0.510 0.620 - 0.460 0.610	V
Junction Capacitance VR=0, f=1.0MHz	Cj	170			pF

- Notes:
1. Valid Provided that Leads are Kept at Ambient Temperature.
 2. Pulse Test: Pulse width = 300uS, Duty cycle ≤ 2%.
 3. dv / dt Measured at Rated VR.

RATING AND CHARACTERISTICS CURVES (B0520LW,B0530W,B0540W)

FIG.1- FORWARD CURRENT DERATING CURVE

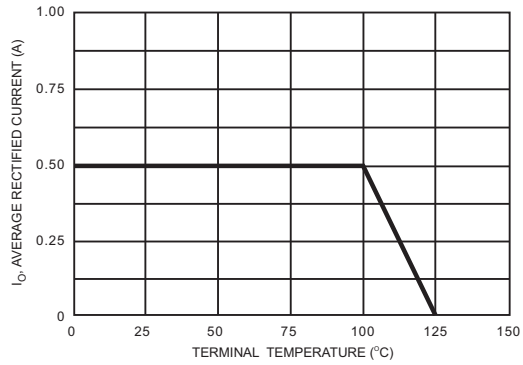


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

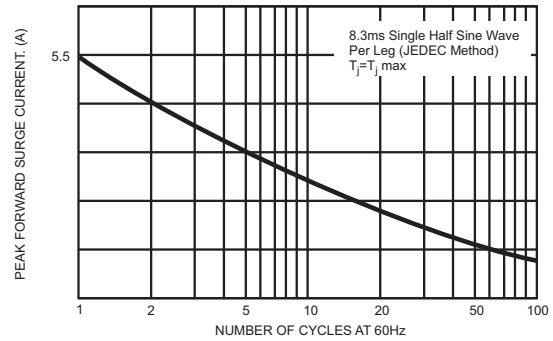


FIG.3- TYPICAL FORWARD CHARACTERISTICS

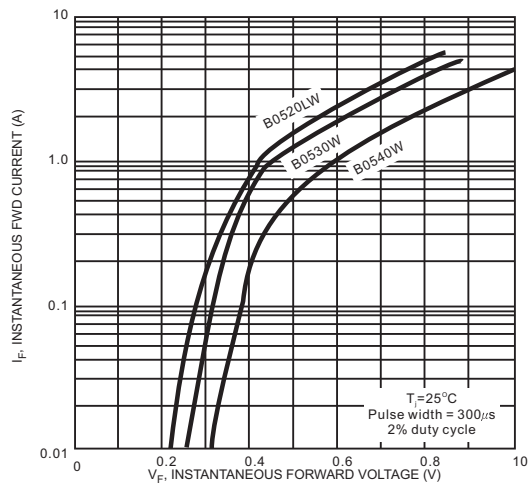


FIG.4- TYPICAL REVERSE CHARACTERISTICS

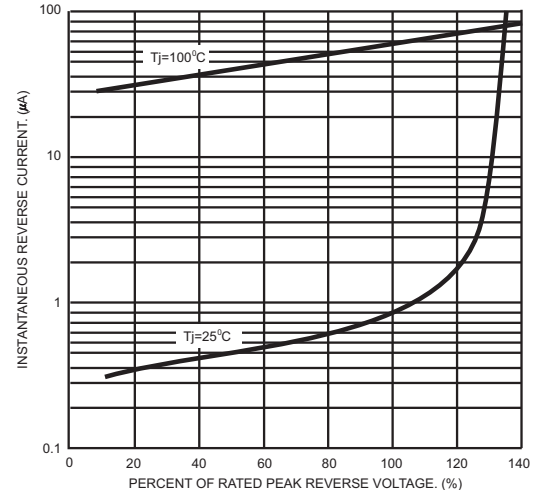


FIG.5- TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE

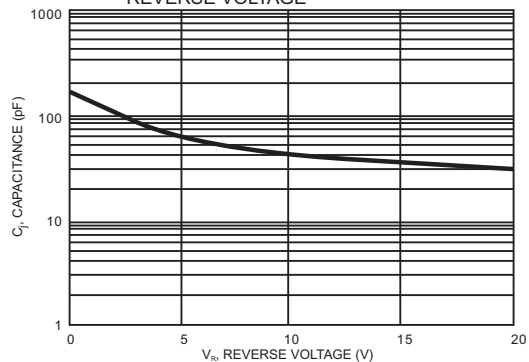
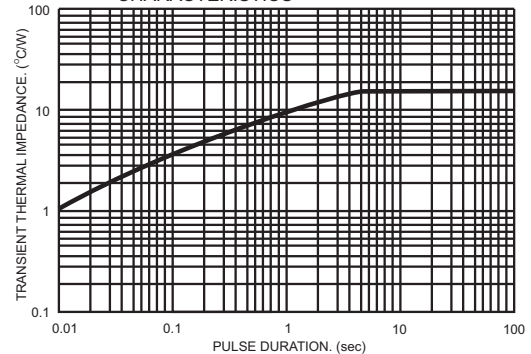
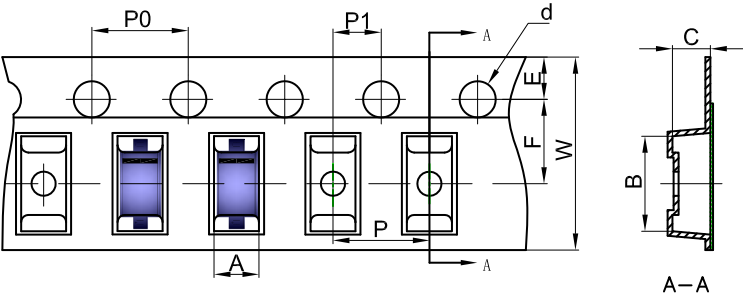


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



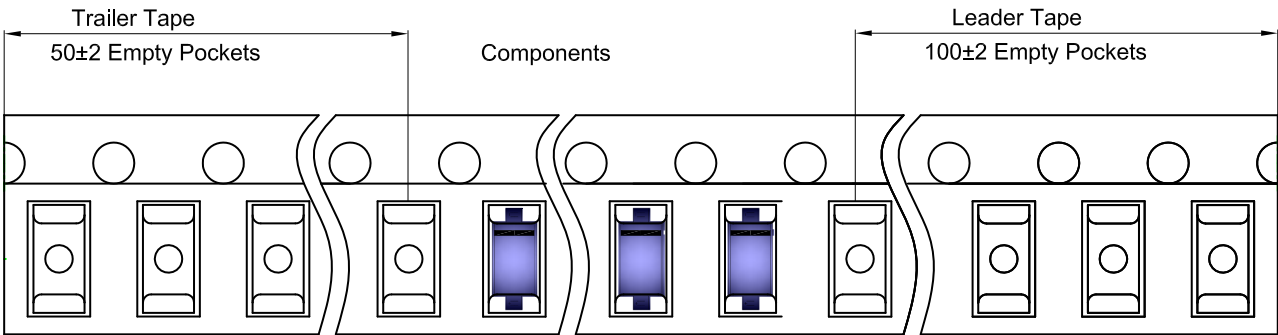
SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape

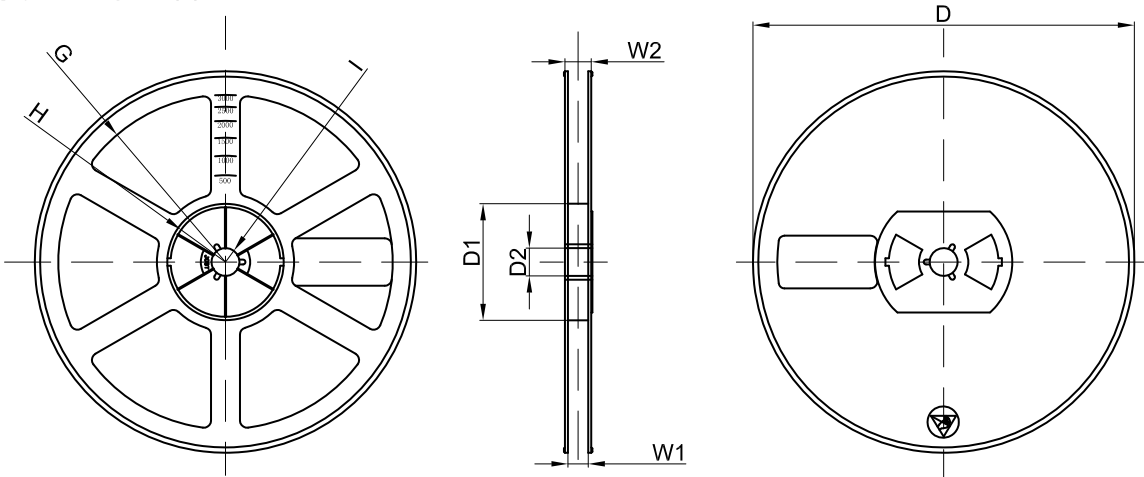


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

PACKAGING OF DIODE

REEL PACK

PACKAGE	PACKING CODE	REEL (EA)	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123	-T	3,000	---	---	178	438*438*220	180,000	9.00

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