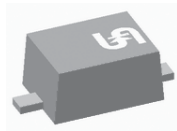


B0520WS - B0530WS

0.5AMP Surface Mount Schottky Barrier Rectifiers

SOD-323F

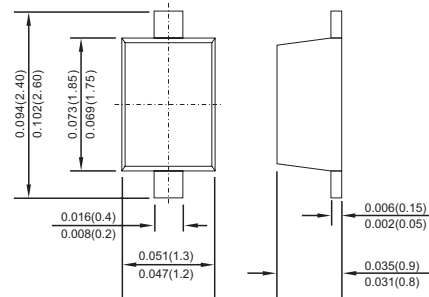


Features

- ✧ Low power loss, high efficiency.
- ✧ High current capability, low VF
- ✧ Epitaxial construction.
- ✧ Guard ring construction for transient protection
- ✧ Available in lead free version

Mechanical Data

- ✧ Case: SOD-323F, plastic
- ✧ Case material – UL Flammability Rating Classification 94V-0
- ✧ Moisture sensitivity: Level 1 per J-STD-020A
- ✧ Polarity: Cathode Band
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Marking: Cathode Band and Type Code
- ✧ Type Code: SD, SE
- ✧ Weight: 0.004 grams (approx.)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	B0520WS	B0530WS	Units
Peak Repetitive Reverse Voltage	V _{RRM}	20	30	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
RMS Reverse Voltage	V _{R(RMS)}	14	21	V
Average Rectified Current @ T _L =100 °C	I _O	0.5		A
Non-repetitive Peak Forward Surge Current 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	2		A
Power Dissipation (Note 1)	P _d	235		mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	426		°C /W
Operating and Storage Temperature Range	T _J , T _{STG}	-40 to + 125		°C

Electrical Characteristics

Type Number	Symbol	Min	Typ	Max	Units
Reverse Breakdown Voltage (Note 2) I _R =500uA	V _{(BR)R}	30			V
Leakage Current (Note 2) V _R =15V V _R =20V V _R =30V	I _R			80 100 500	uA
Forward Voltage Drop (Note 2) I _F =0.1A I _F =0.5A	V _F		— 0.45	0.36 0.47	V
Junction Capacitance V _R =0, f=1MHz	C _j		58		pF

- Notes:
1. Valid Provided that Leads are Kept at Ambient Temperature.
 2. Short duration test pulse used to minimize self-heating effect.

RATINGS AND CHARACTERISTIC CURVES (B0520WS THRU B0530WS)

FIG.1- FORWARD CURRENT DERATING CURVE

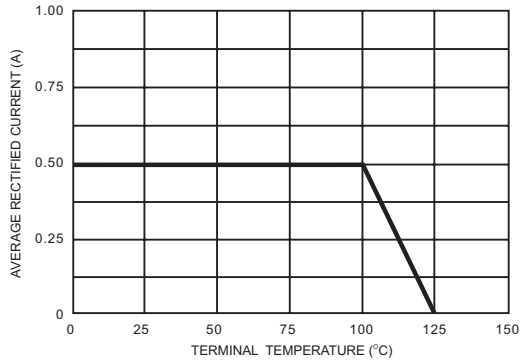


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

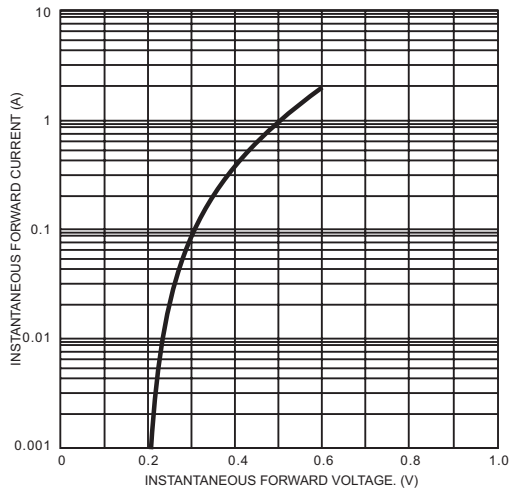
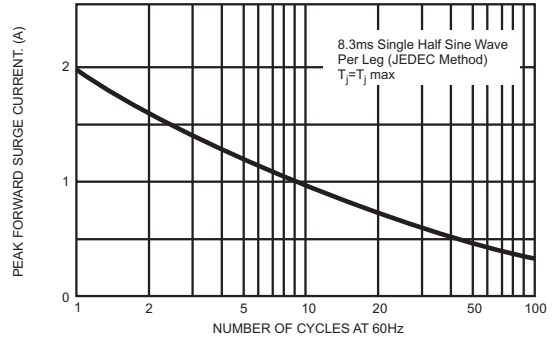


FIG.4- TYPICAL REVERSE CHARACTERISTICS

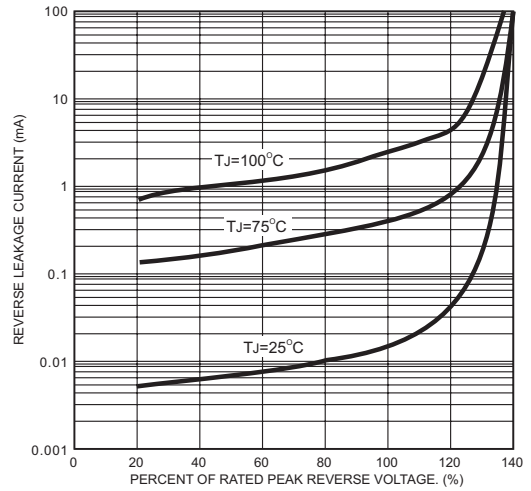


FIG. 5- TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

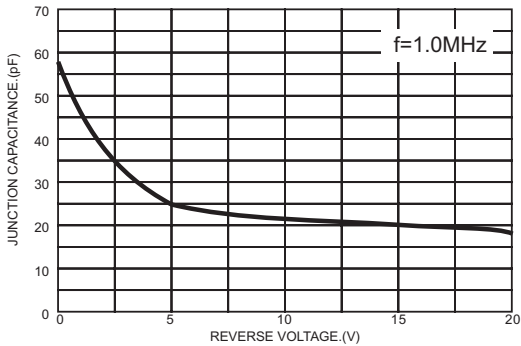


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

