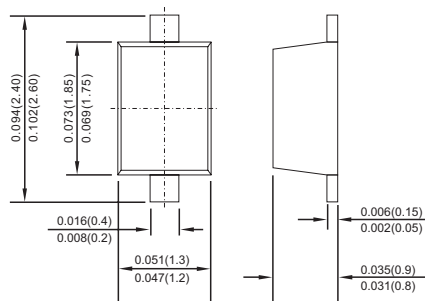
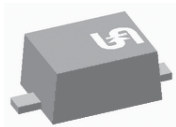


# B0520WS - B0530WS

## 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	VRRM			
Working Peak Reverse Voltage	VRWM	20	30	V
DC Blocking Voltage	VR			
RMS Reverse Voltage	VR(RMS)	14	21	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	2		A
Power Dissipation (Note 1)	Pd	235		mW
Thermal Resistance Junction to Ambient Air (Note 1)	RθJA	426		°C /W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-40 to + 125		°C

### Electrical Characteristics

Type Number	Symbol	Min	Typ	Max	Units
Reverse Breakdown Voltage (Note 2) IR=500uA	V <sub>(BR)R</sub>	30			V
Leakage Current (Note 2) VR=15V VR=20V VR=30V	I <sub>R</sub>			80 100 500	uA
Forward Voltage Drop (Note 2) IF=0.1A IF=0.5A	V <sub>F</sub>		— 0.45	0.36 0.47	V
Junction Capacitance VR=0, f=1MHz	C <sub>j</sub>		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

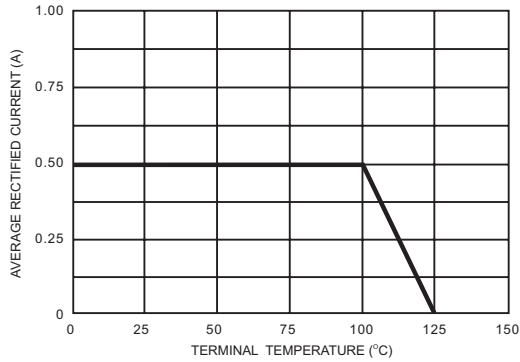


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

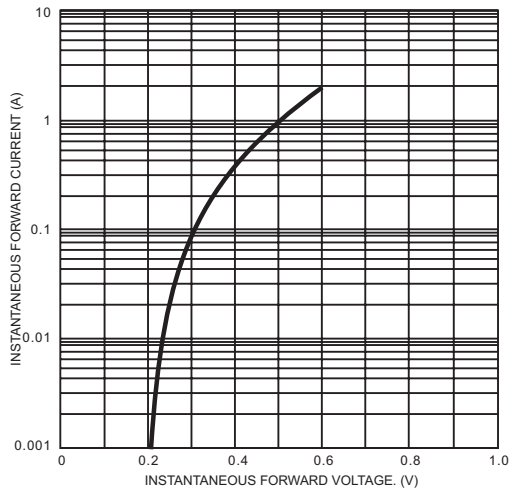
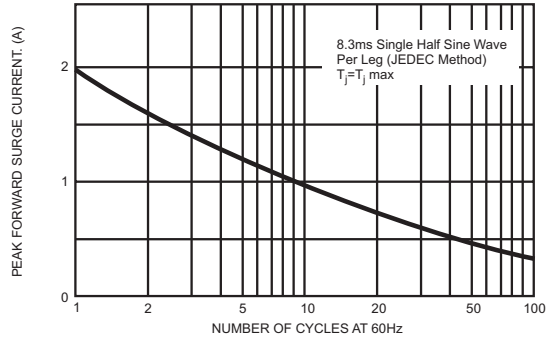


FIG.4- TYPICAL REVERSE CHARACTERISTICS

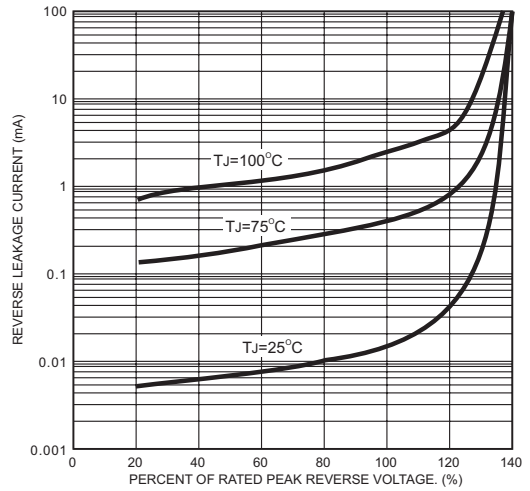


FIG. 5- TYPICAL TOTAL CAPACITANCE VS REVERSE VOLTAGE

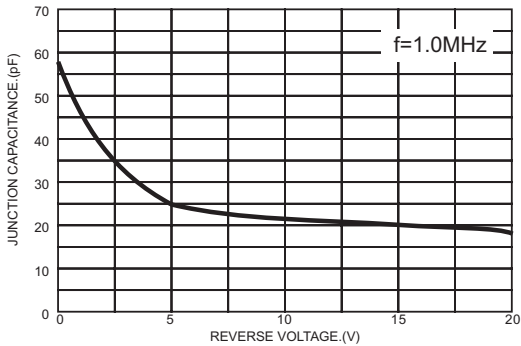


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

