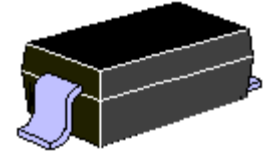


### DESCRIPTION

These Schottky rectifiers are for general-purpose high-speed switching applications particularly where a small package is required. This thermally efficient design permits an average forward current rating of 0.5 amps in a small SOD-323 package when adequate PC board mounting is provided.

### APPEARANCE



SOD-323

**IMPORTANT:** For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

### FEATURES

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Reverse Energy Tested
- High Current Capability
- Extremely Low Thermal Resistance
- UL 94V-0 Flammability Classification

### APPLICATIONS / BENEFITS

- High-speed switching faster than conventional pn junction ultrafast rectifiers
- Small SOD-323 surface mount size and footprint
- Low profile height for miniaturized instruments

### MAXIMUM RATINGS

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance: 60°C/W Junction to Lead
- Forward Surge Current ( $I_{FSM}$ ): 20 Amps at 8.3 ms, half-sine wave
- Average Forward Current ( $I_o$ ): 0.5 Amps at 30°C

### MECHANICAL AND PACKAGING

- Molded SOD-323 Surface Mount
- Weight: 0.012 grams (approximate)
- Body marked with device marking code and polarity band
- Tape & Reel per EIA Standard 481-1-A with 7 inch reel for 3,000 pieces per reel
- Soldering Temperatures: 260°C for 10 sec max

### ELECTRICAL CHARACTERISTICS @ 25°C unless otherwise specified

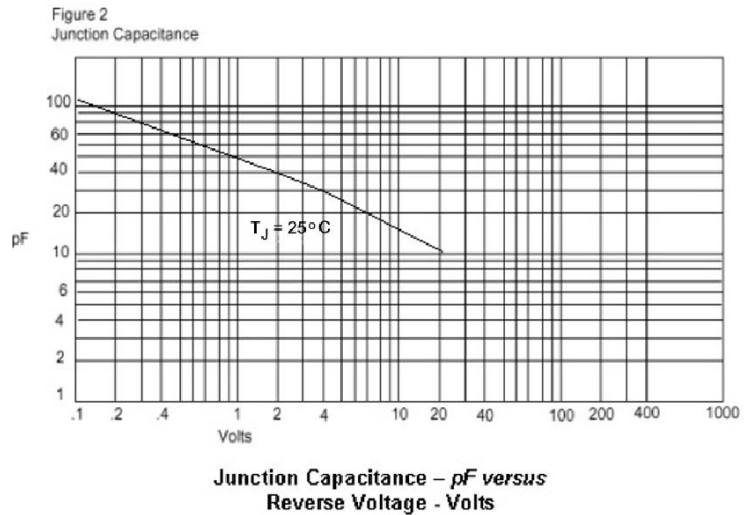
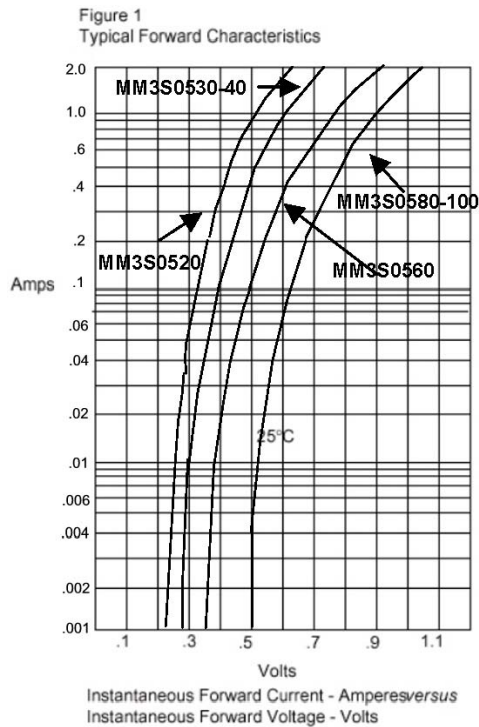
Part Number	DEVICE MARKING	Working Peak Reverse Voltage	Leakage Current	Forward Voltage*	Reverse Current	Capacitance
		$V_{RWM}$ Volts	@ $V_{RWM}$ $I_R$ mA	@ 0.5A $V_F$ Volts	@ $V_{RWM}$ 100°C $I_R$ mA	@ $V_R = 4V$ , 1 MHz C pF
		MAX	MAX	MAX	MAX	TYP
MM3S0520	S01	20	0.5	0.45	20	30
MM3S0530	S02	30	0.5	0.55	20	30
MM3S0540	S03	40	0.5	0.55	20	30
MM3S0560	S04	60	0.5	0.70	20	30
MM3S0580	S05	80	0.5	0.85	20	30
MM3S05100	S06	100	0.5	0.85	20	30

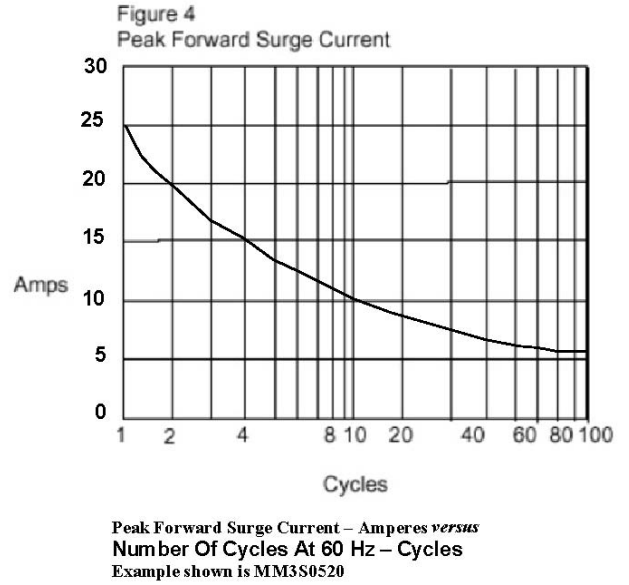
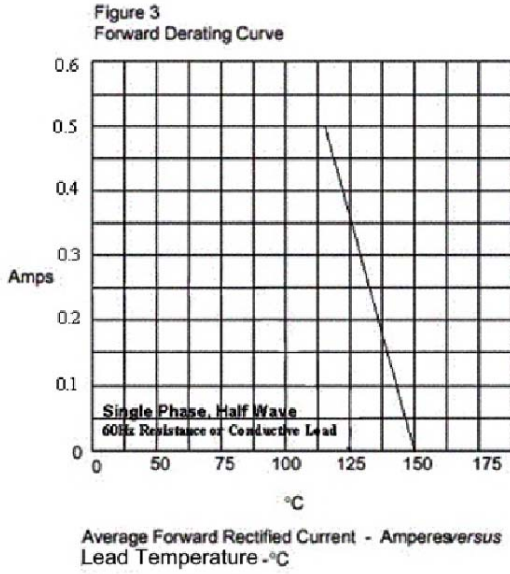
\*Pulse test at 300  $\mu$ s

**SYMBOLS & DEFINITIONS**

Symbol	Definition
$V_{RWM}$	Working Peak Reverse Voltage: The maximum peak voltage that can be applied over the operating temperature range.
$V_F$	Maximum Forward Voltage: The maximum forward voltage the device will exhibit at a specified current.
$I_R$	Maximum Leakage Current: The maximum reverse leakage current that will flow at the specified voltage and temperature.
C	Capacitance: The capacitance in picofarads with an applied reverse 4 volts at a frequency of 1 MHz.

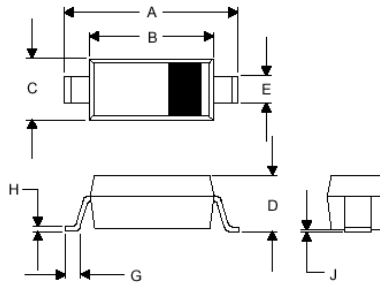
**GRAPHS**





**PACKAGE DIMENSIONS**

**SOD-323**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.090	.107	2.30	2.70	
B	.063	.071	1.60	1.80	
C	.045	.053	1.15	1.35	
D	.031	.045	0.80	1.15	
E	.010	.016	0.25	0.40	
G	.004	.018	0.10	0.45	
H	.004	.010	0.10	0.25	
J	----	.006	----	0.15	

SUGGESTED SOLDER PAD LAYOUT

