

**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.

**KEY FEATURES**

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Reverse Energy Tested
- High Current Capability
- Extremely Low Thermal Resistance

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

**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

**APPLICATIONS**

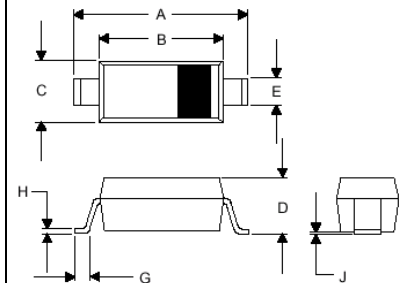
- High-Speed Switching
- Surface Mount

**ELECTRICAL CHARACTERISTICS @ 25°C Unless otherwise specified**

Part Number	Repetitive Peak Recovery Voltage $V_{RWM}$ Volts	Leakage Current @ $V_{RWM}$ $I_R$ mA	Forward Voltage * @ 0.5A $V_F$ Volts	Leakage Current @ $V_{RWM}$ 100°C $I_R$ mA	Capacitance @ $V_R = 4 V$ , 1 MHz $C_J$ pF
	MAX	MAX	MAX	MAX	TYP
MM3S0520	20	0.5	0.45	20	30
MM3S0530	30	0.5	0.55	20	30
MM3S0540	40	0.5	0.55	20	30
MM3S0560	60	0.5	0.70	20	30
MM3S0580	80	0.5	0.85	20	30
MM3S05100	100	0.5	0.85	20	30

\* Pulse test at 300  $\mu$ s

**SOD-323**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
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

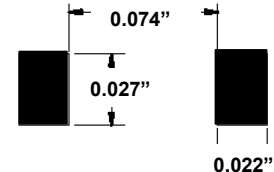
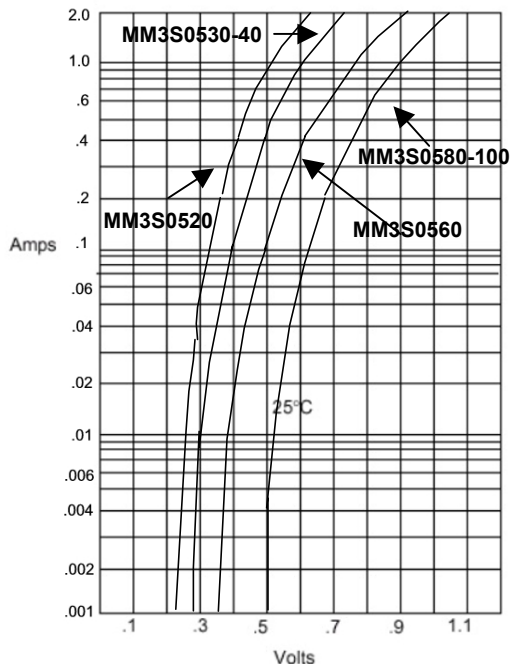
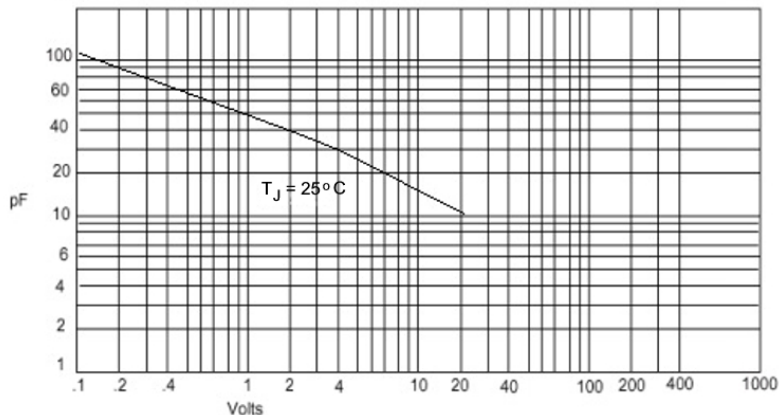


Figure 1  
Typical Forward Characteristics



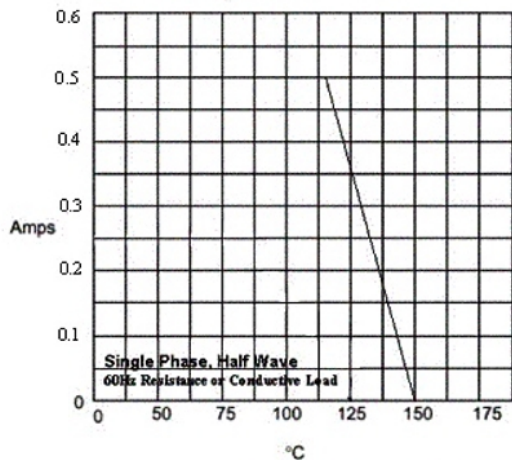
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Junction Capacitance



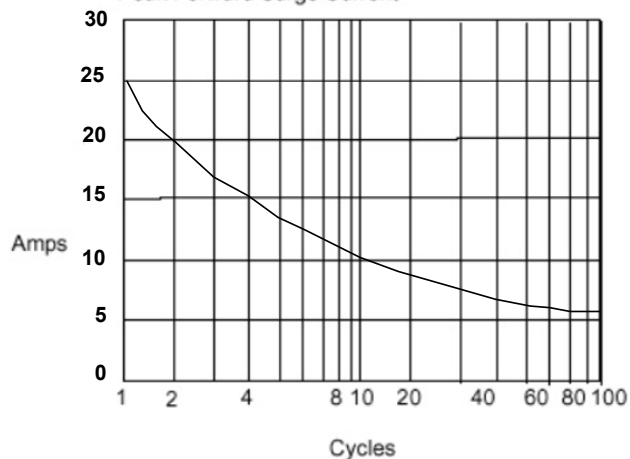
Junction Capacitance - pF versus  
Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Lead Temperature -°C

Figure 4  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60 Hz - Cycles  
Example shown is MM3S0520



**MM3S0520 thru MM3S05100**

**0.5 Amp Schottky Rectifier  
20 -100 Volts**

**PRODUCT PREVIEW**

**www.Microsemi.com**

**NOTES**