Surface Mount Schottky Power Rectifier

. . . employing the Schottky Barrier principle in a large area metal–to–silicon power diode. State–of–the–art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes, in surface mount applications where compact size and weight are critical to the system.

- Small Compact Surface Mountable Package with J–Bend Leads
- Rectangular Package for Automated Handling
- Highly Stable Oxide Passivated Junction
- Very Low Forward Voltage Drop (0.5 Volts Max @ 3.0 A, T_J = 25°C)
- Excellent Ability to Withstand Reverse Avalanche Energy Transients
- Guardring for Stress Protection

Mechanical Characteristics:

- Case: Epoxy, Molded
- Weight: 217 mg (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped in 16 mm Tape and Reel, 2500 units per reel
- Polarity: Notch in Plastic Body Indicates Cathode Lead
- Marking: B34, B36

MBRS340T3
MBRS360T3

Motorola Preferred Device

SCHOTTKY BARRIER RECTIFIERS 3.0 AMPERES 40, 60 VOLTS

CASE 403–03

MAXIMUM RATINGS

Rating	Symbol	MBRS340T3	MBRS360T3	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	60	Volts
Average Rectified Forward Current	$I_{F(AV)}$	3.0 @ T_L = 100°C 4.0 @ T_L = 90°C		Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	80		Amps
Operating Junction Temperature	T_J	– 65 to +125		°C

THERMAL CHARACTERISTICS

Thermal Resistance — Junction to Lead	$R_{\theta JL}$	11	11	°C/W

ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (1) (i_F = 3.0 A, T_J = 25°C)	V_F	0.525	0.740	Volts
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, T_J = 25°C) (Rated dc Voltage, T_J = 100°C)	i_R	2.0 20	0.5 20	mA

(1) Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

Preferred devices are Motorola recommended choices for future use and best overall value.

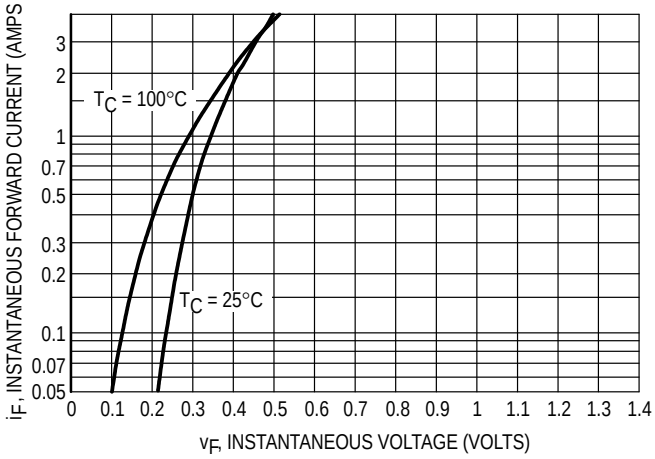


Figure 1. Typical Forward Voltage

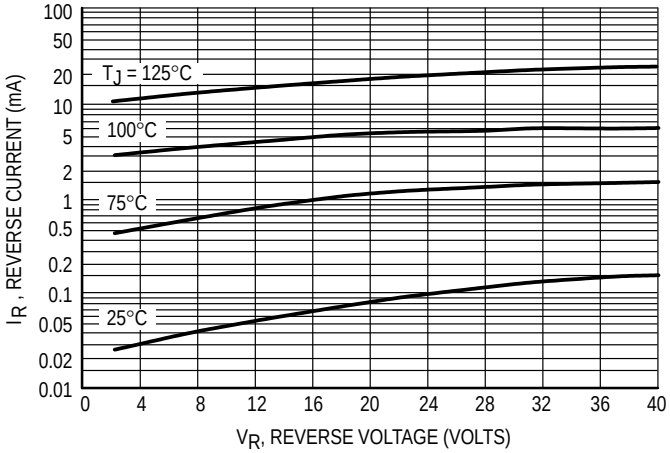


Figure 2. Typical Reverse Current

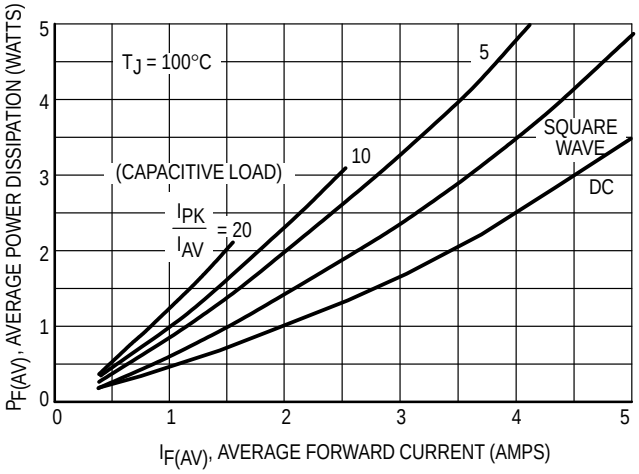


Figure 3. Power Dissipation

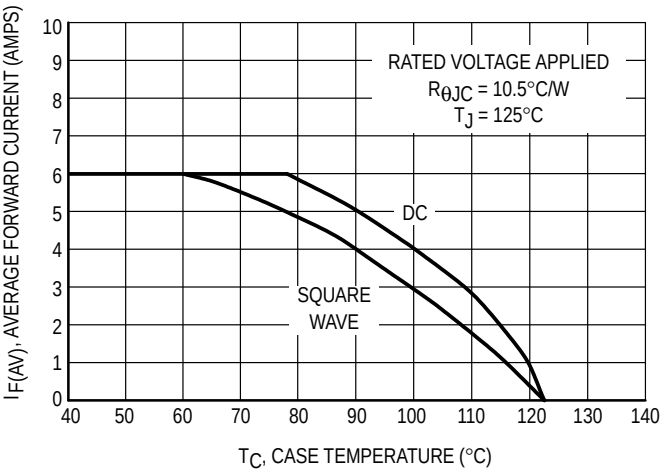


Figure 4. Current Derating (Case)

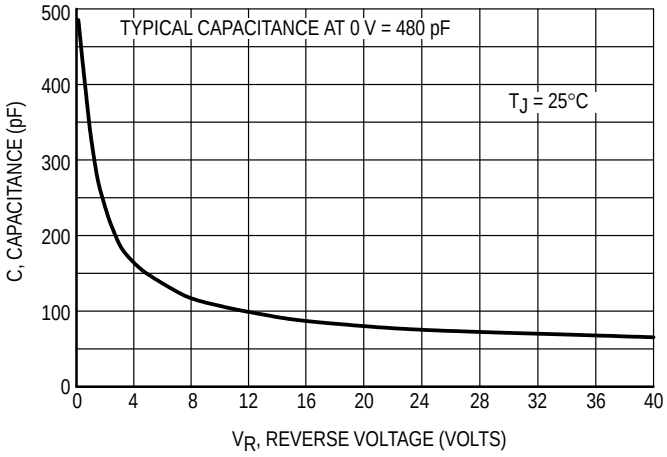
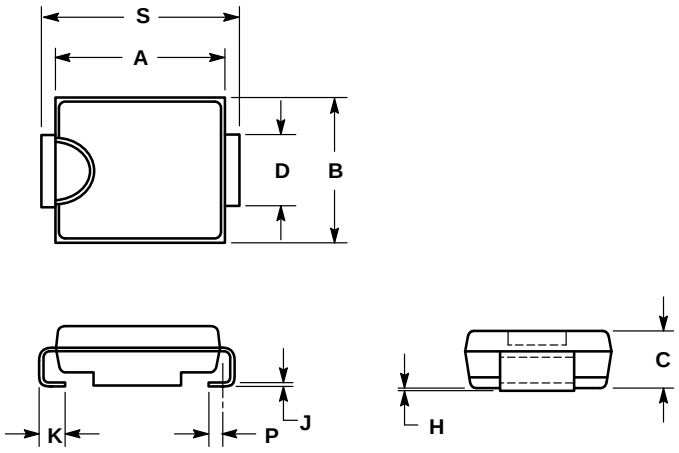


Figure 5. Typical Capacitance

PACKAGE DIMENSIONS



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.260	0.280	6.60	7.11
B	0.220	0.240	5.59	6.10
C	0.075	0.095	1.90	2.41
D	0.115	0.121	2.92	3.07
H	0.0020	0.0060	0.051	0.152
J	0.006	0.012	0.15	0.30
K	0.030	0.050	0.76	1.27
P	0.020 REF		0.51 REF	
S	0.305	0.320	7.75	8.13

CASE 403–03
ISSUE B

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