Preferred Devices

Axial Lead Rectifiers

... 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 overlap contact. Ideally suited for use as rectifiers in low-voltage, high-frequency inverters, free wheeling diodes, and polarity protection diodes.

- High Current Capability
- Low Stored Charge, Majority Carrier Conduction
- Low Power Loss/High Efficiency
- Highly Stable Oxide Passivated Junction
- Guard-Ring for Stress Protection
- Low Forward Voltage
- High Surge Capacity

Mechanical Characteristics:

- Case: Epoxy, Molded
- Weight: 1.1 gram (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 220°C Max. for 10 Seconds, 1/16" from case
- Shipped in plastic bags, 500 per bag
- Available Tape and Reeled, 1500 per reel, by adding a "RL" suffix to the part number
- Polarity: Cathode indicated by Polarity Band
- ESD Protection: Human Body Model > 4000 V (Class 3) Machine Model > 400 V (Class C)

MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage MBR835	V _{RRM} V _{RWM} V _R	35	V
MBR840 MBR845	6.	40 45	
Average Rectified Forward Current T _L = 75°C (Psi _{JL} = 12°C/W, P.C. Board Mounting, see Note 2)	Ι _Ο	8.0	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I _{FSM}	140	A
Operating and Storage Junction Temperature Range (Reverse Voltage Applied)	T _J , T _{stg}	-65 to +125	°C
Voltage Rate of Change (Rated V_R)	dv/dt	10	V/ns



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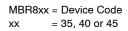
http://onsemi.com

SCHOTTKY BARRIER RECTIFIERS 8.0 AMPERES

AXIAL LEAD CASE 267-05 (DO-201AD) STYLE 1

MARKING DIAGRAM





ORDERING INFORMATION

Device	Package	Shipping	
MBR835	Axial Lead	500 Units/Bag	
MBR835RL	Axial Lead	1500/Tape & Reel	
MBR840	Axial Lead	500 Units/Bag	
MBR840RL	Axial Lead	1500/Tape & Reel	
MBR845	Axial Lead	500 Units/Bag	
MBR845RL	Axial Lead	1500/Tape & Reel	

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

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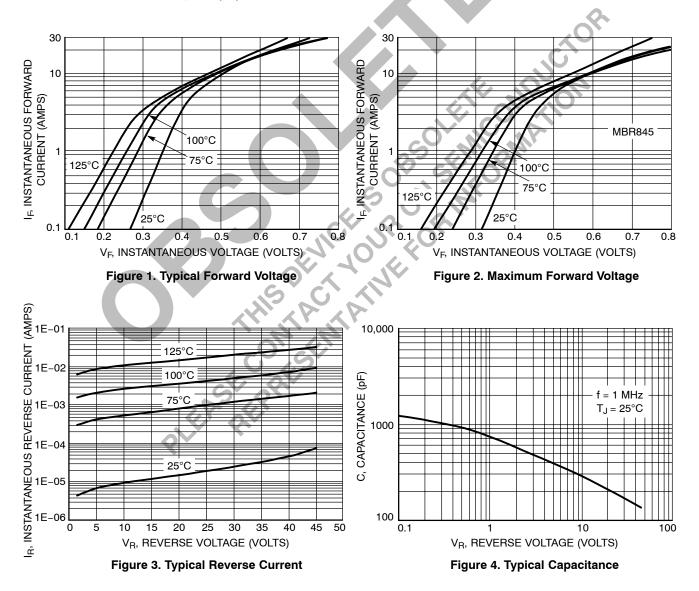
THERMAL CHARACTERISTICS

Characteristic	Symbol	0.9 in x 0.9 in Copper Pad Size	6.75 in x 6.75 in Copper Pad Size	Unit
Thermal Resistance – Junction-to-Lead (See Note 2 – Mounting Data)	$R_{ heta JL}$	13	12	°C/W
Thermal Resistance – Junction-to-Ambient (See Note 2 – Mounting Data)	$R_{\theta JA}$	50	40	

ELECTRICAL CHARACTERISTICS ($T_L = 25^{\circ}C$ unless otherwise noted)

Characteristic		Symbol	Мах	Unit
Maximum Instantaneous Forward Voltage (Note 1) (i _F = 8.0 Amps, T _L = 25°C)		VF	0.55	V
Maximum Instantaneous Reverse Current @ Rated dc Voltage (Note 1) $T_L = 25^{\circ}C$ $T_L = 100^{\circ}C$		İR	1.0 50	mA

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



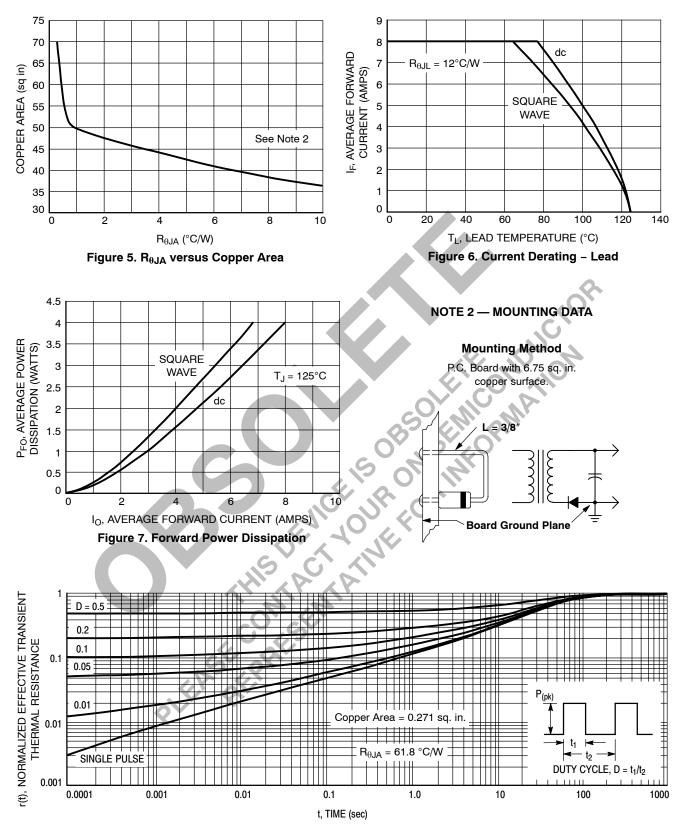
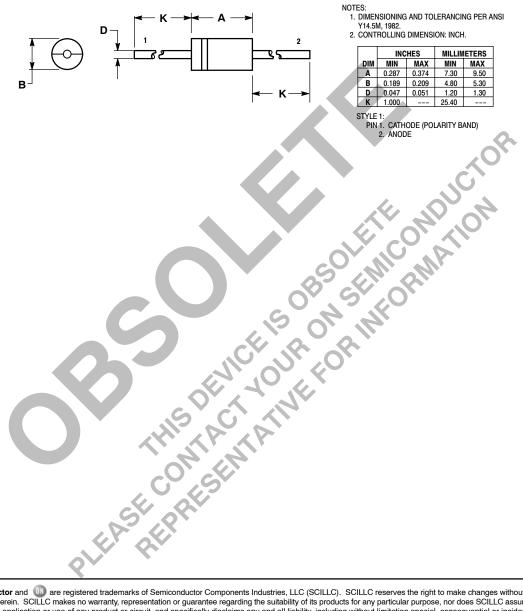


Figure 8. Thermal Response, Junction-to-Ambient

PACKAGE DIMENSIONS

AXIAL LEAD CASE 267-05 (DO-201AD) ISSUE G



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