Preferred Device

SWITCHMODE[™] Power Rectifier

DPAK Surface Mount Package

This SWITCHMODE power rectifier which uses the Schottky Barrier principle with a proprietary barrier metal, is designed for use as output rectifiers, free wheeling, protection and steering diodes in switching power supplies, inverters and other inductive switching circuits.

Features

- Low Forward Voltage
- 125°C Operating Junction Temperature
- Epoxy Meets UL 94 V-0 @ 0.125 in
- Compact Size
- Lead Formed for Surface Mount
- Pb-Free Packages are Available

Mechanical Characteristics

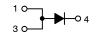
- Case: Epoxy, Molded
- Weight: 0.4 Gram (Approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped 75 Units Per Plastic Tube
- Available in 16 mm Tape and Reel, 2500 Units Per 13 in Reel, by Adding a "T4" Suffix to the Part Number



ON Semiconductor®

http://onsemi.com

SCHOTTKY BARRIER RECTIFIER 8.0 AMPERES, 35 VOLTS



MARKING DIAGRAM



Y = Year WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping [†]
MBRD835L	DPAK	75 Units/Rail
MBRD835LG	DPAK (Pb-Free)	75 Units/Rail
MBRD835LT4	DPAK	2500/Tape & Reel
MBRD835LT4G	DPAK (Pb-Free)	2500/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	35	V
Average Rectified Forward Current (At Rated V_R , $T_C = 88^{\circ}C$)	I _{F(AV)}	8.0	A
Peak Repetitive Forward Current (At Rated V _R , Square Wave, 20 kHz, T _C = 80°C)	I _{FRM}	16	A
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions, halfwave, single phase, 60 Hz)	I _{FSM}	75	A
Repetitive Avalanche Current (Current Decaying Linearly to Zero in 1 $\mu s,$ Frequency Limited by T_{Jmax})	I _{AR}	2.0	A
Storage / Operating Case Temperature	T _{stg}	–65 to +150	°C
Operating Junction Temperature	TJ	–65 to +125	°C
Voltage Rate of Change (Rated V _R)	dv/dt	10,000	V/µs

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Rating	Symbol	Value	Unit
Thermal Resistance – Junction-to-Case	$R_{\theta JC}$	2.8	°C/W
Thermal Resistance – Junction-to-Ambient (Note 1)	$R_{\theta JA}$	80	°C/W

ELECTRICAL CHARACTERISTICS

$\begin{array}{l} \mbox{Maximum Instantaneous Forward Voltage (Note 2)} & (i_F = 8 \mbox{ Amps, } T_C = +25^{\circ}C) \\ & (i_F = 8 \mbox{ Amps, } T_C = +125^{\circ}C) \end{array}$	V _F	0.51 0.41	V
Maximum Instantaneous Reverse Current (Note 2) (Rated dc Voltage, $T_C = +25^{\circ}C$) (Rated dc Voltage, $T_C = +100^{\circ}C$)	۱ _R	1.4 35	mA

1. Rating applies when surface mounted on the minimum pad size recommended.

2. Pulse Test: Pulse Width = 300 μ s, Duty Cycle \leq 2%.

TYPICAL CHARACTERISTICS

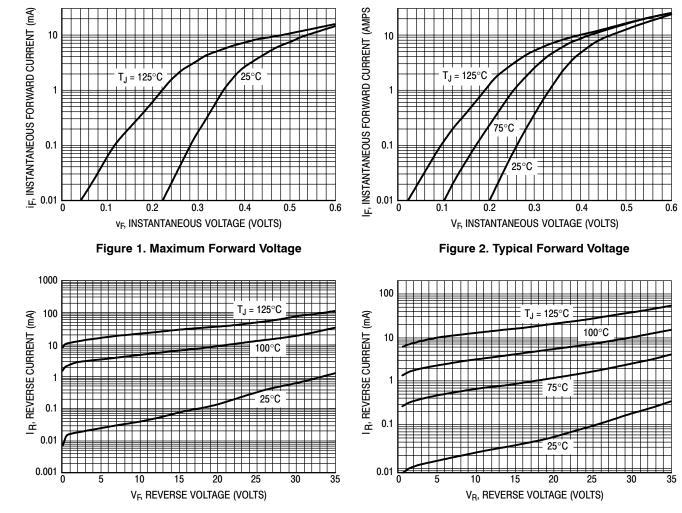
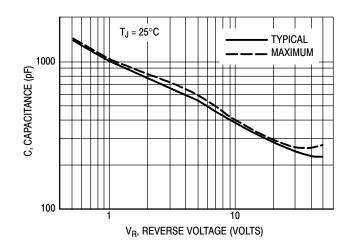


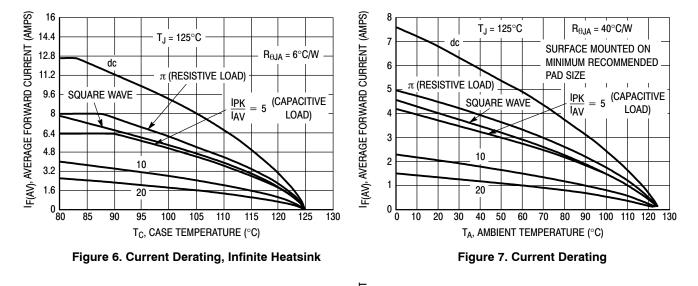
Figure 3. Maximum Reverse Current

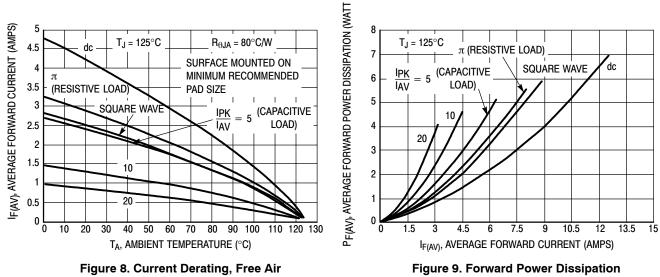
Figure 4. Typical Reverse Current

TYPICAL CHARACTERISTICS



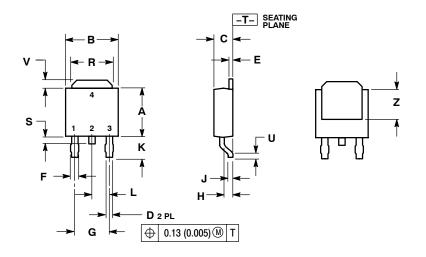






PACKAGE DIMENSIONS

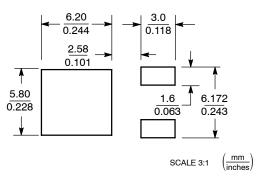




NOTES: 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982. 2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
Α	0.235	0.245	5.97	6.22
В	0.250	0.265	6.35	6.73
С	0.086	0.094	2.19	2.38
D	0.027	0.035	0.69	0.88
E	0.018	0.023	0.46	0.58
F	0.037	0.045	0.94	1.14
G	0.180 BSC		4.58 BSC	
н	0.034	0.040	0.87	1.01
J	0.018	0.023	0.46	0.58
ĸ	0.102	0.114	2.60	2.89
L	0.090 BSC		2.29 BSC	
R	0.180	0.215	4.57	5.45
S	0.025	0.040	0.63	1.01
U	0.020		0.51	
V	0.035	0.050	0.89	1.27
Z	0.155		3.93	

SOLDERING FOOTPRINT*



*For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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