



MBRB3040T THRU MBRB30200T

Reverse Voltage - 40 to 200 Volts Forward Current - 30.0 Ampere

SCHOTTKY BARRIER GLASS PASSIVATED RECTIFIERS

FEATURES

- ◆ High current capability
- ◆ Low forward voltage drop
- ◆ Low power loss, high efficiency
- ◆ High surge capability
- ◆ High temperature soldering guaranteed
- ◆ Mounting position: any

MECHANICAL DATA

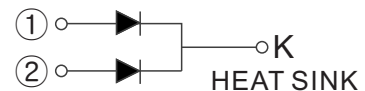
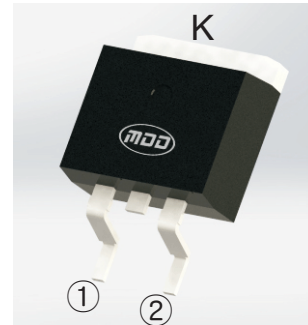
Case: TO-263 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

TO-263(D²PAK)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

MCHARACTERISTICS	SYMBOL	MBRB 3040T	MBRB 3045T	MBRB 3060T	MBRB 30100T	MBRB 30150T	MBRB 30200T	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V _{RMS}	28	32	42	70	105	140	V
Maximum DC blocking voltage	V _{DC}	40	45	60	100	150	200	V
Maximum average forward rectified current per diode per device	I _{F(AV)}	15 30						A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method) per device	I _{FSM}	200						A
Maximum instantaneous forward voltage at 15A DC Per leg	V _F	0.75		0.80	0.88	0.92	0.95	V
Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =125°C	I _R	0.1 20			0.05 20			mA
Typical junction capacitance (NOTE 1)	C _J	600		400				pF
Typical thermal resistance (NOTE 2)	R _{θJA}	45						°C/W
Operating junction temperature range	T _J	-55 to +150				-55 to +175		°C
Storage temperature range	T _{STG}	-55 to +150				-55 to +175		°C

Note: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.
2. PCB. Mounted on 10cm x 10cm x 1mm copper pad areas
3. The typical data above is for reference only.



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Typical Characteristics

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

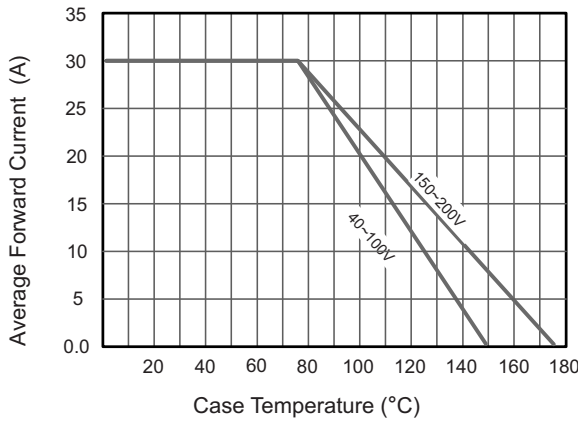


Fig.2 Typical Reverse Characteristics

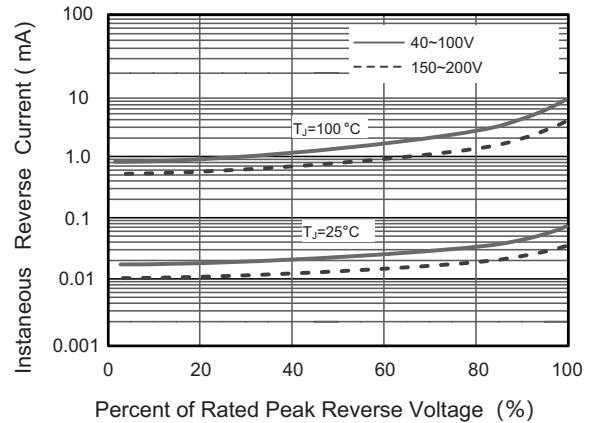


Fig.3 Typical Forward Characteristic(per leg)

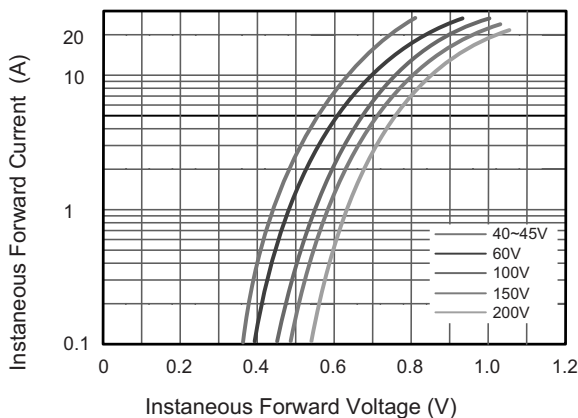


Fig.4 Typical Junction Capacitance

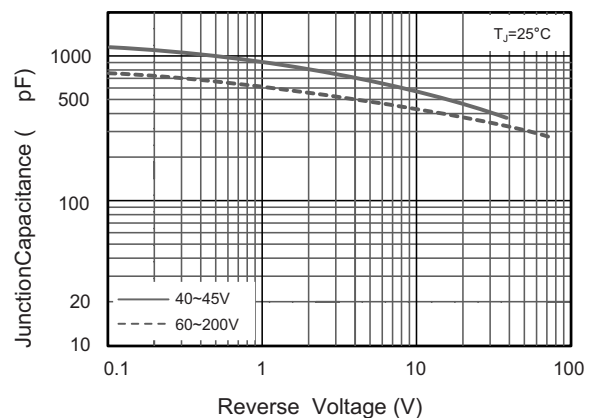


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

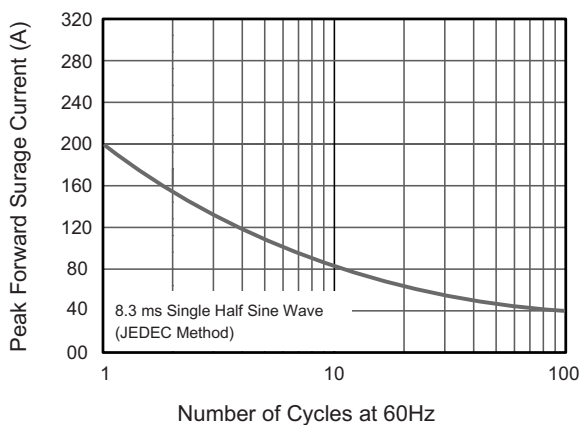
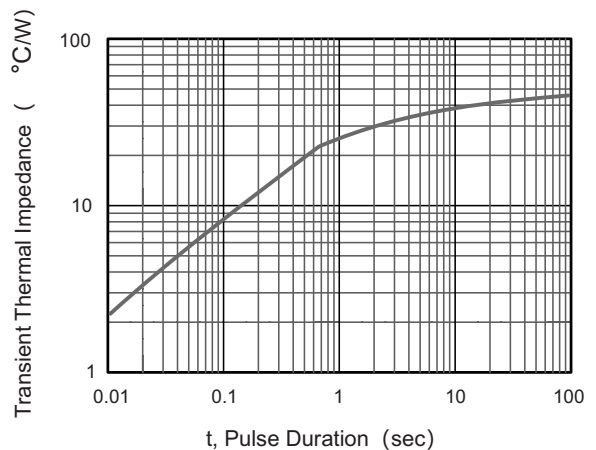


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.

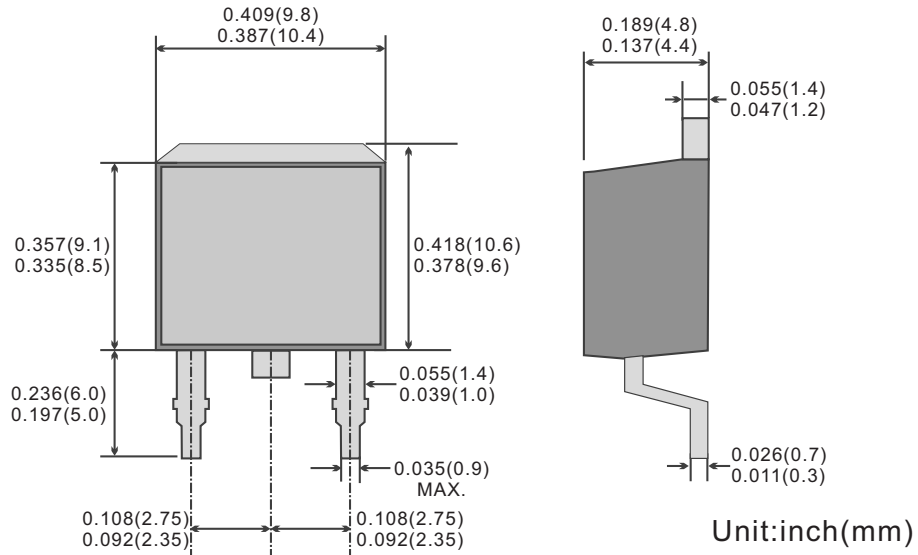


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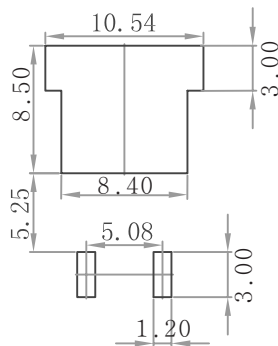
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Outline Drawing

TO-263(D²PAK) Package Outline Dimensions



Suggested Pad Layout



Note:

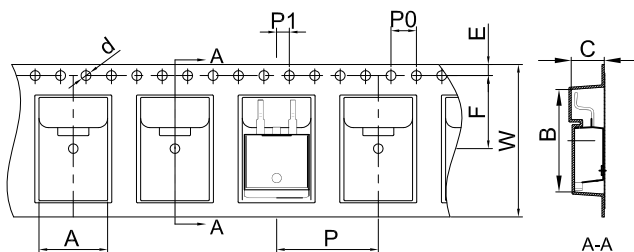
1. Controlling dimension: in/millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.



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TO-263 Embossed Carrier Tapeape

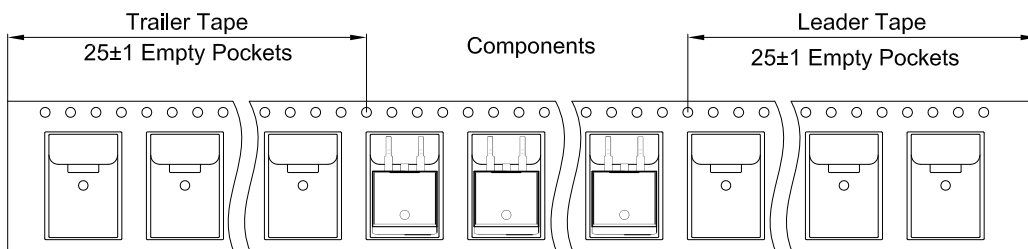


Packaging Description:

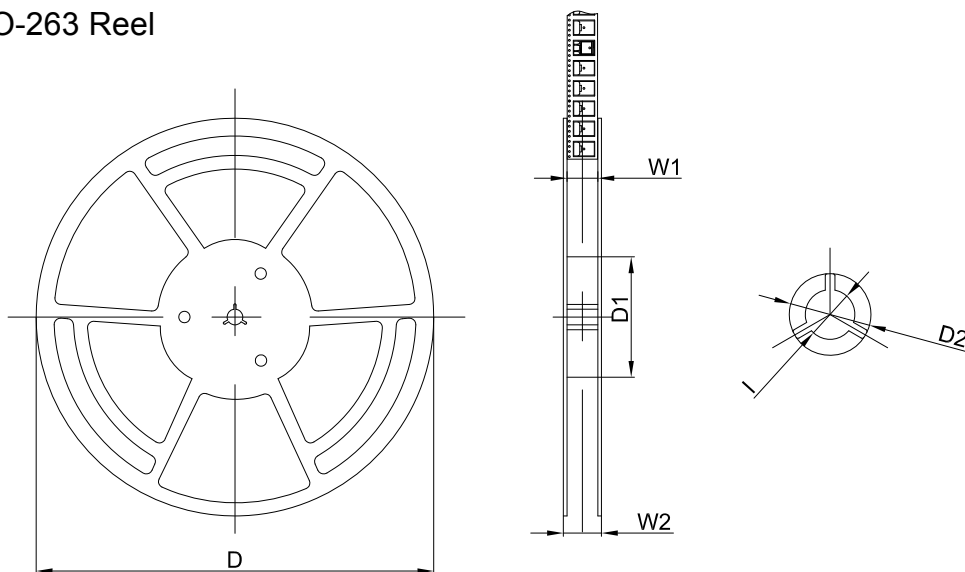
TO-263 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 800 units per 13" or 33.0cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-263	10.80	16.13	5.21	Ø1.55	1.75	11.50	4.00	16.00	2.00	24.00

TO-263 Tape Leader and Trailer



TO-263 Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	W1	W2	I
13"Dia	Ø330.00	100.00	Ø21.00	24.4	30.4	Ø13.00

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
800 pcs	13 Inch	1,600 pcs	340×336×66	8,000 pcs	400×353×365	