

Ultra-Fast Recovery Diodes

Features

- ◆ High frequency operation.
- ◆ High surge forward current capability
- ◆ High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- ◆ Guard ring for enhanced ruggedness and long term reliability
- ◆ Low forward Voltage drop

Mechanical Data

Case: TO-263 molded plastic body

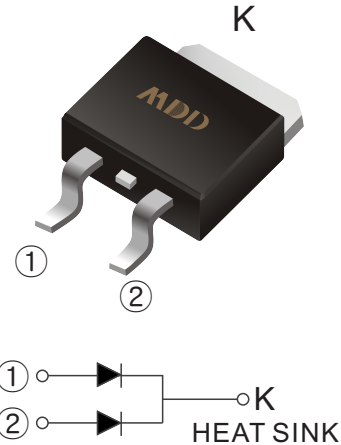
Terminals: Plated axial leads, solderable per MIL-STD-750,

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.

Parameter	Symble	MDD MURB2020D	MDD MURB2040D	MDD MURB2060D	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current Per leg Per device	$I_{F(AV)}$	10 20			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Per leg)	I_{FSM}	150			A
Max Instantaneous Forward Voltage at 20 A (Per leg)	V_F	1.0	1.3	1.6	V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$	I_R	10 500			uA
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	35			ns
Typical Thermal Resistance	$R_{\theta JC}$	4			°C/W
Operating Junction Temperature Range	T_j	-55 ~ +175			°C
Storage Temperature Range	T_{stg}	-55 ~ +175			°C

NOTE 1: Reverse recovery test conditions $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$

Ratings And Characteristic Curves

Fig.1 Typical Forward Current Derating Curve

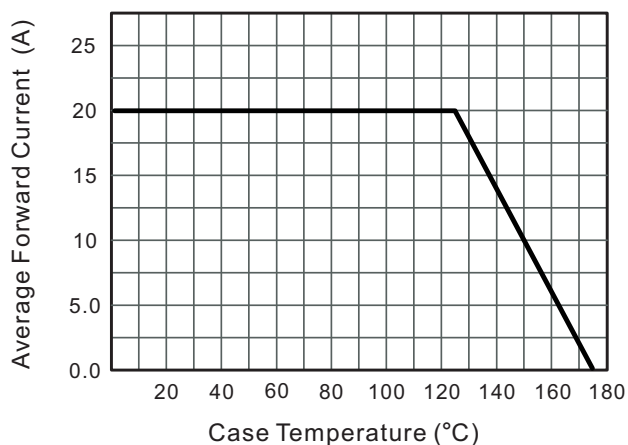


Fig.2 Typical Reverse Characteristics

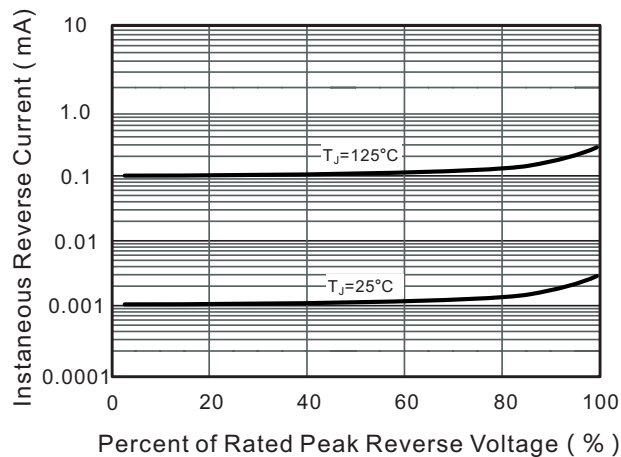


Fig.3 Typical Forward Characteristic

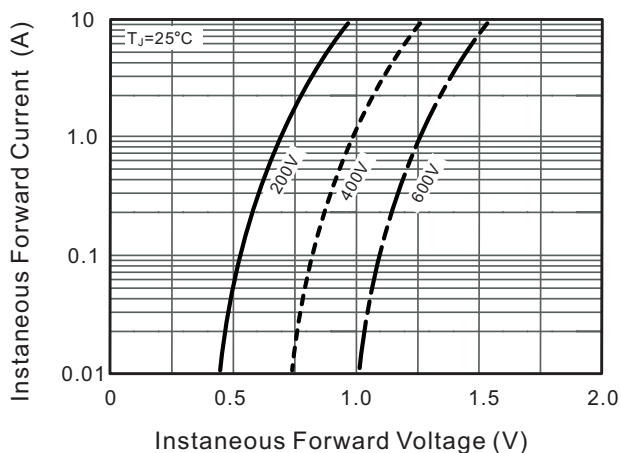
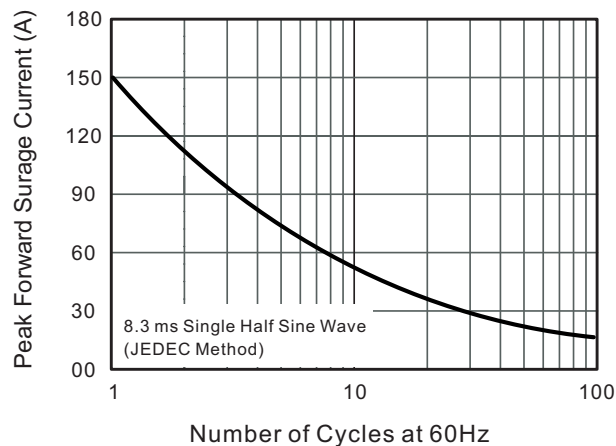


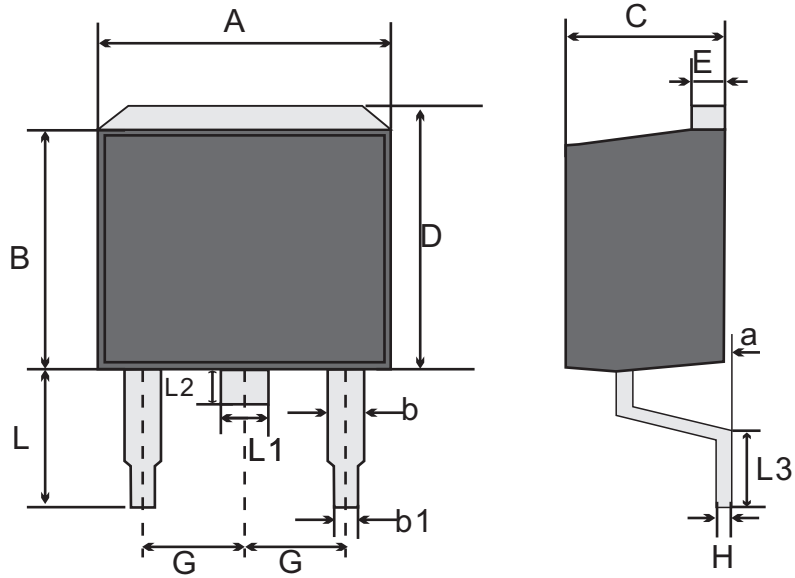
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.

Outlitne Drawing

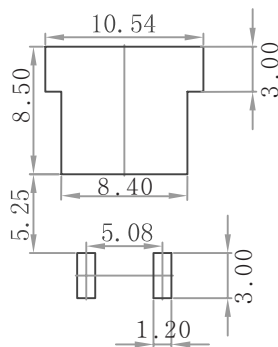
TO-263(D²PAK) Package Outline Dimensions



TO-263(D²PAK) mechanical data

UNIT		A	B	b	b1	C	D	E	G	H	L	L1	L2	L3	a
mm	max	10.4	9.4	1.50	0.91	4.80	11.00	1.40	2.74	0.60	6.0	1.47	1.75	3.18	0.25
	min	9.6	8.4	1.07	0.70	4.30	9.68	1.20	2.34	0.30	4.1	1.07	1.0	1.7	0

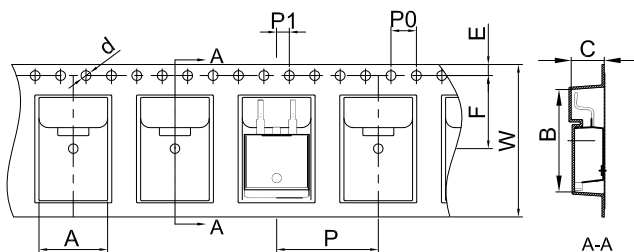
Suggested Pad Layout



Note:

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

TO-263 Embossed Carrier Tapeape

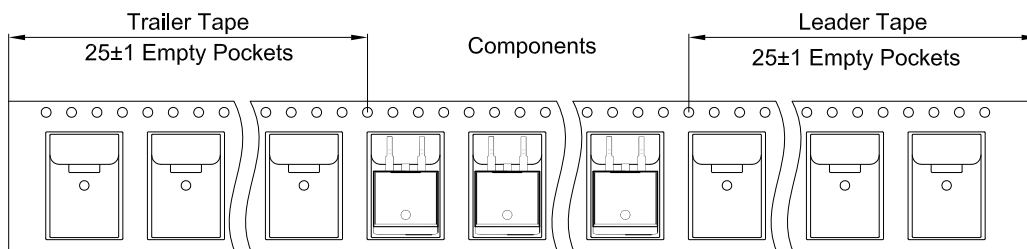


Packaging Description:

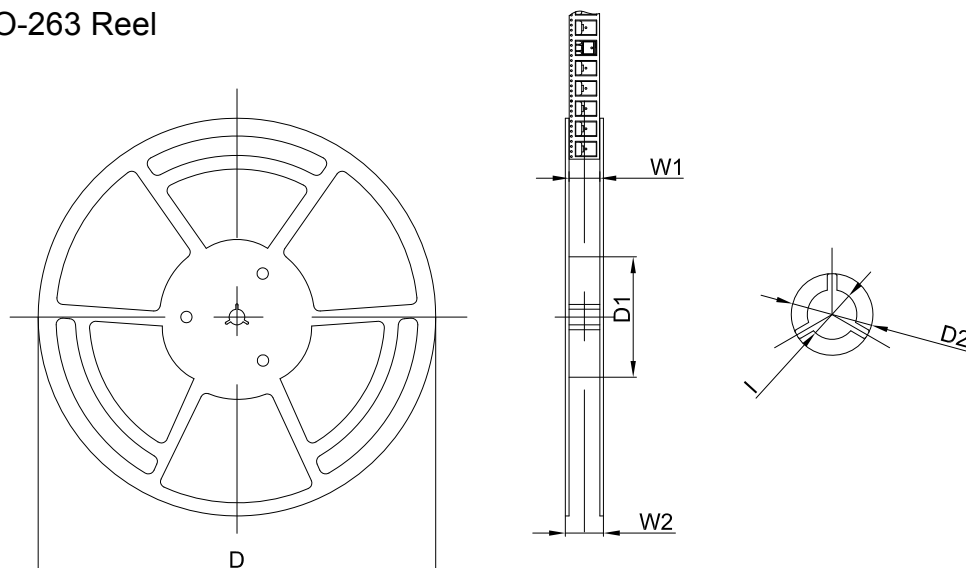
TO-263 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in 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	



MURB2020D THRU MURB2060D

Reverse Voltage - 200 to 600 Volts Forward Current - 20.0 Ampere

Important Notice and Disclaimer

Microdiode Electronics (Shenzhen) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Microdiode Electronics (Shenzhen) makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Microdiode Electronics (Shenzhen) assume any liability for application assistance or customer product design. Microdiode Electronics (Shenzhen) does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Microdiode Electronics (Shenzhen).

Microdiode Electronics (Shenzhen) products are not authorized for use as critical components in life support devices or systems without express written approval of Microdiode Electronics (Shenzhen).