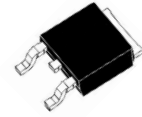


MBR540D-HF Thru. MBR5200D-HF

RoHS Device
Halogen Free

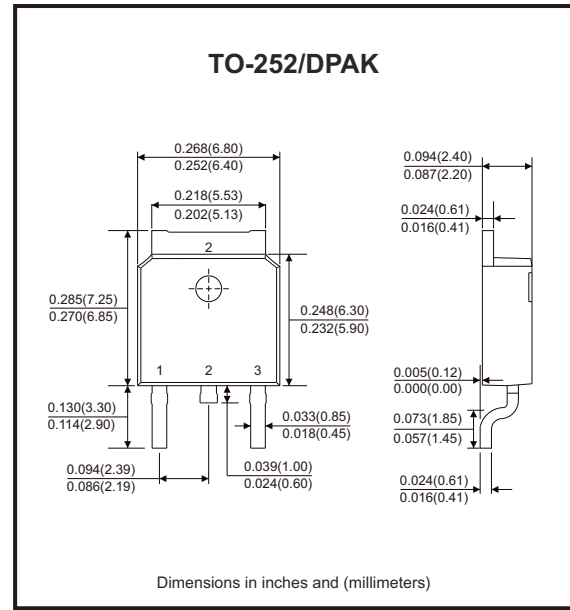


Features

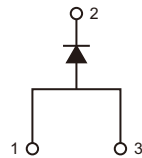
- Plastic package has underwrites laboratory flammability classification 94V-0.
- Low profile package.
- Built-in strain relief.
- Low power loss, high efficiency.
- High surge capacity.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.

Mechanical data

- Case: TO-252/DPAK, molded plastic.
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026.
- Polarity: As marked.



Circuit Diagram



Maximum Ratings and Electrical Characteristics (at $T_A=25^\circ\text{C}$, unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	MBR540D-HF	MBR560D-HF	MBR5100D-HF	MBR5150D-HF	MBR5200D-HF	Unit
Max. recurrent peak reverse voltage	V_{RRM}	40	60	100	150	200	V
Max. RMS voltage	V_{RMS}	28	42	70	105	140	V
Max. DC blocking voltage	V_{DC}	40	60	100	150	200	V
Max. average forward current (see Fig.1)	$I_{F(AV)}$	5					A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150					A
Max. forward voltage at 5A per leg	V_F	0.6	0.7	0.85	0.9	0.92	V
Max. DC reverse current at $T_J=25^\circ\text{C}$ Rated DC blocking voltage $T_J=100^\circ\text{C}$	I_R	0.5 20					mA
Typical thermal resistance (Note 1)	$R_{\theta JC}$	15					$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150					$^\circ\text{C}$

Note: 1. Measured on FR-4 PCB copper, minimum recommended pad layout.

Rating and Characteristics Curves (MBR540D-HF Thru. MBR5200D-HF)

Fig.1 - Typical Forward Current Derating Curve

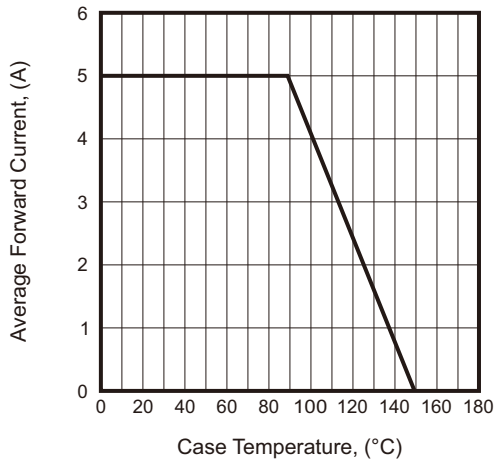


Fig.2 - Maximum Non-Repetitive Forward Surge Current

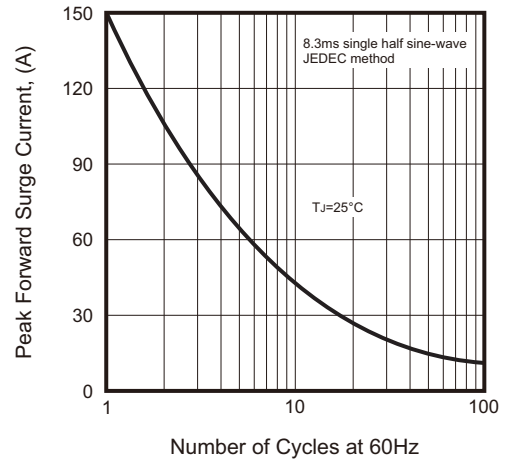


Fig.3 - Typical Forward Characteristics

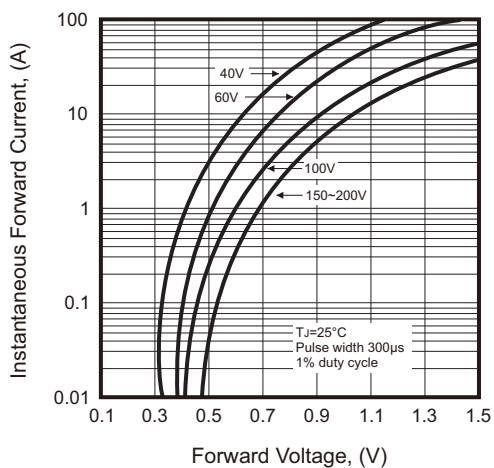
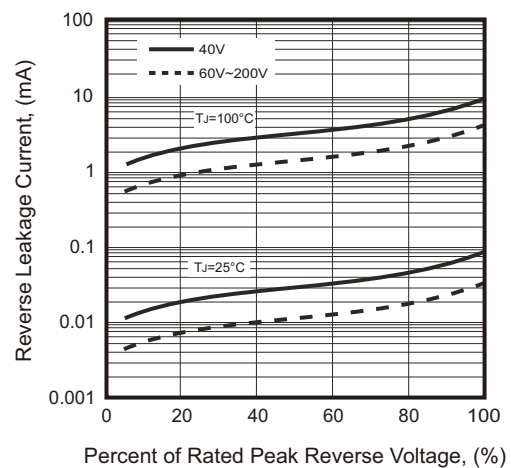
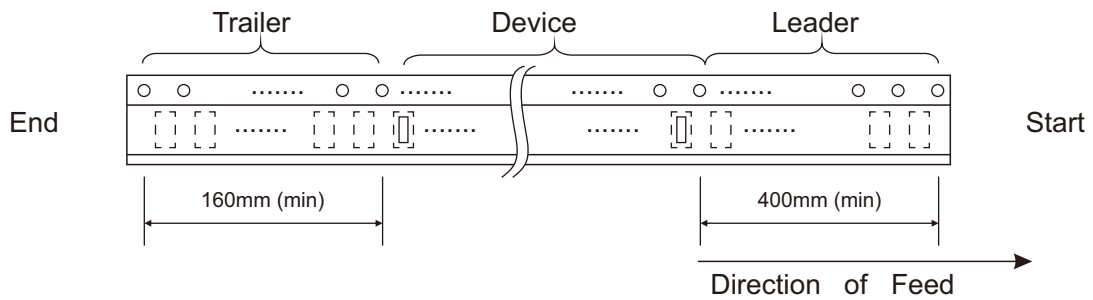
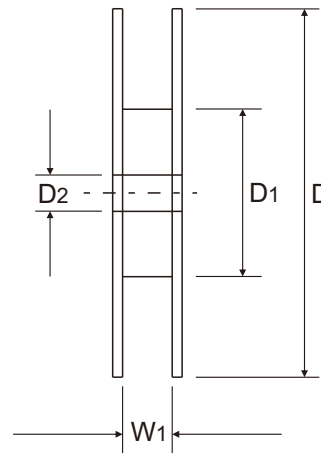
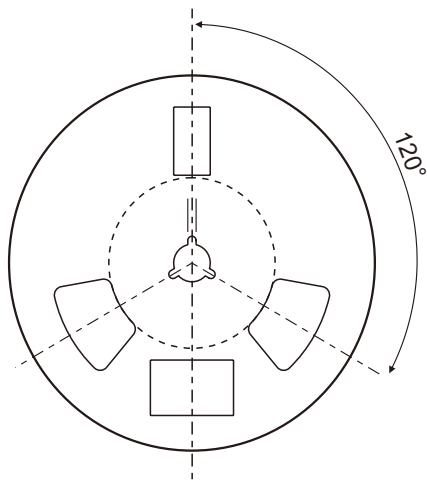
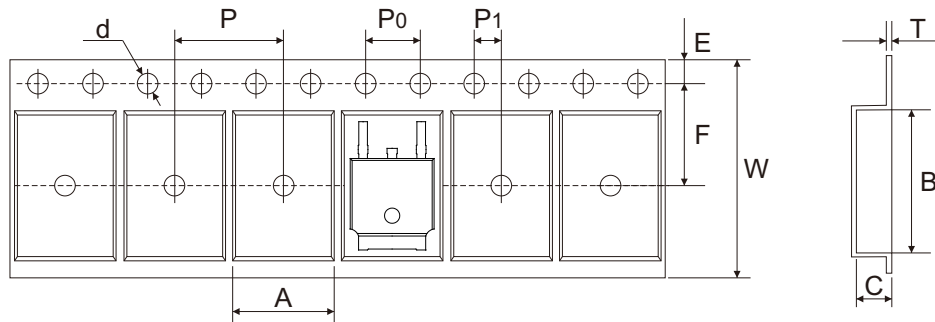


Fig.4 - Typical Reverse Characteristics



Reel Taping Specification

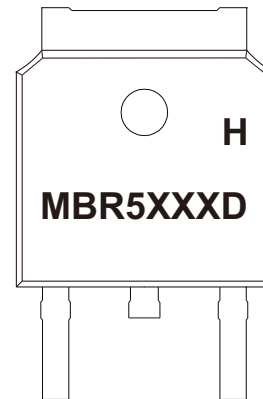


TO-252 /DPAK	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	6.90 ± 0.10	10.50 ± 0.10	2.65 ± 0.10	1.55 ± 0.05	330 ± 1.00	110 ± 2.00	13.00 ± 0.20
	(inch)	0.272 ± 0.004	0.413 ± 0.004	0.104 ± 0.004	0.061 ± 0.002	12.992 ± 0.039	4.331 ± 0.079	0.512 ± 0.008

TO-252 /DPAK	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.30 ± 0.05	16.00 + 0.10 - 0.20	16.80 ± 0.40
	(inch)	0.069 ± 0.004	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.012 ± 0.002	0.630 + 0.004 - 0.008	0.661 ± 0.016

Marking Code

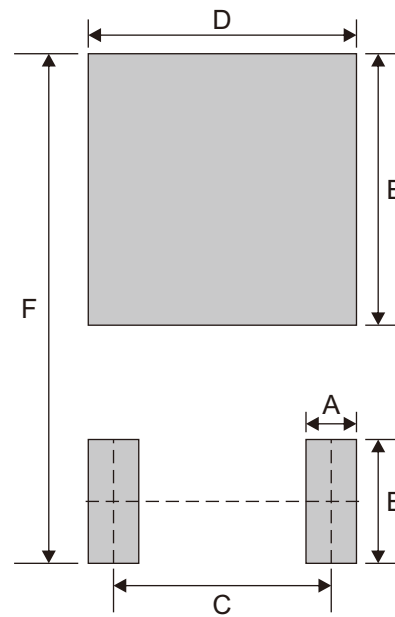
Part Number	Marking Code
MBR540D-HF	MBR540D
MBR560D-HF	MBR560D
MBR5100D-HF	MBR5100D
MBR5150D-HF	MBR5150D
MBR5200D-HF	MBR5200D



xx/xxx = Marking code

Suggested P.C.B. PAD Layout

SIZE	TO-252/DPAK	
	(mm)	(inch)
A	1.06	0.042
B	2.60	0.102
C	4.572	0.180
D	5.632	0.222
E	5.70	0.224
F	10.70	0.421



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
TO-252/DPAK	2,500	13