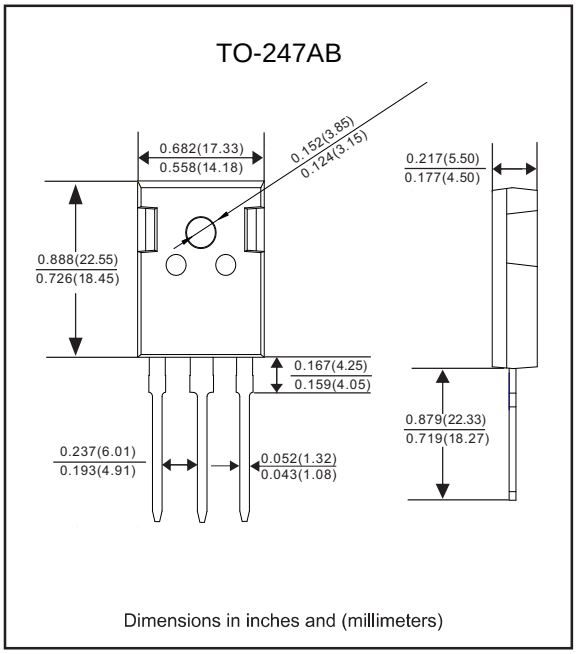
MBR3040PT THRU MBR30200PT

30A High Barrier Power Schottky Rectifiers - 40V-200V

Features

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any
- Suffix"-H"indicates Halogen-free parts.

Package outline



Mechanical data

- Case: TO-247AB
- Terminals:Lead solderable per MIL-STD-202,Method 208

Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_O			30.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			250	A
Reverse current	$V_R = V_{RRM}$ T_a = 25°C	I_R			0.05	mA
	$V_R = V_{RRM}$ T_a = 125°C				20	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		400		pF
Thermal resistance	Junction to case	$R_{\theta JC}$		2		°C/W
Storage temperature		T_{STG}	-55		+175	°C

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	Operating temperature T_J, (°C)
MBR3040PT	40	28	40	0.70	-55 to +150
MBR3045PT	45	31.5	45		
MBR3060PT	60	42	60	0.80	
MBR30100PT	100	70	100	0.88	
MBR30150PT	150	105	150	0.92	-55 to +175
MBR30200PT	200	140	200	0.95	

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage
IF = 15.0A, 25°C

Rating and characteristic curves

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

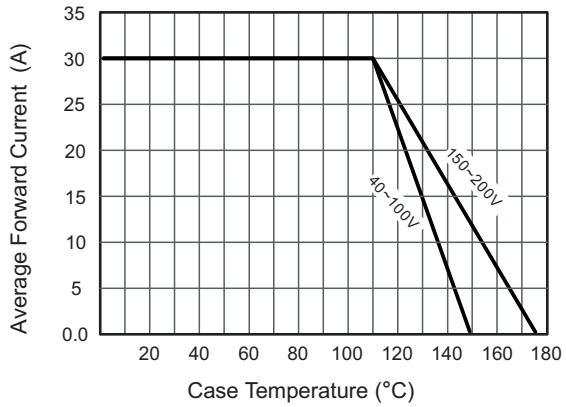


Fig.2 Typical Reverse Characteristics

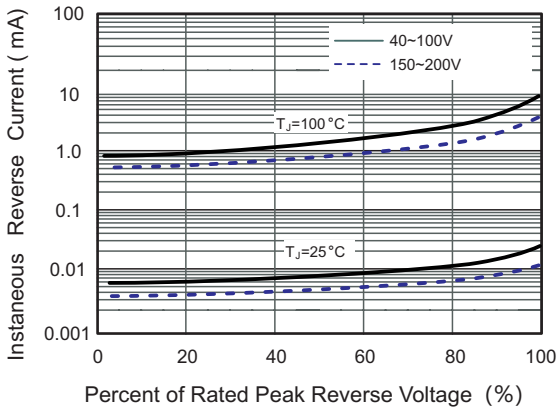


Fig.3 Typical Forward Characteristic(per leg)

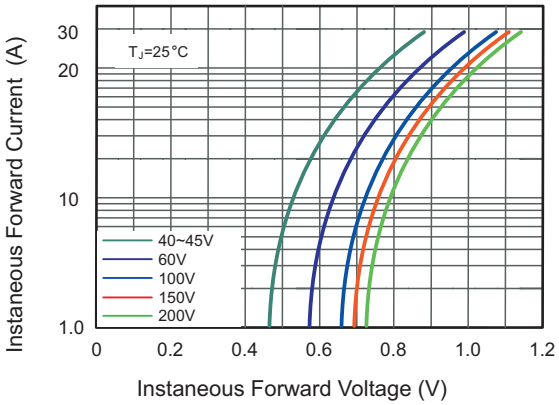


Fig.4 Typical Junction Capacitance

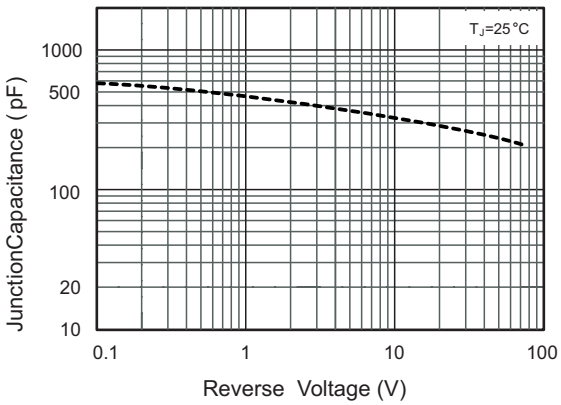


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

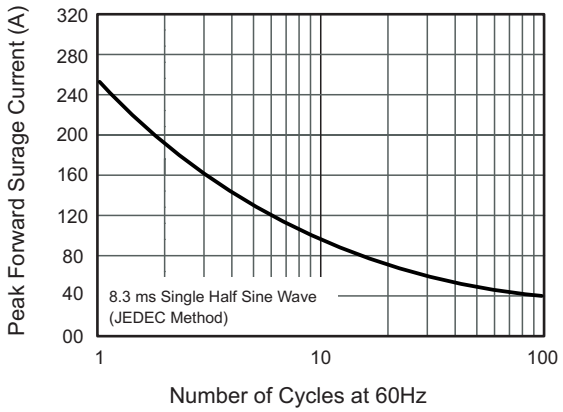
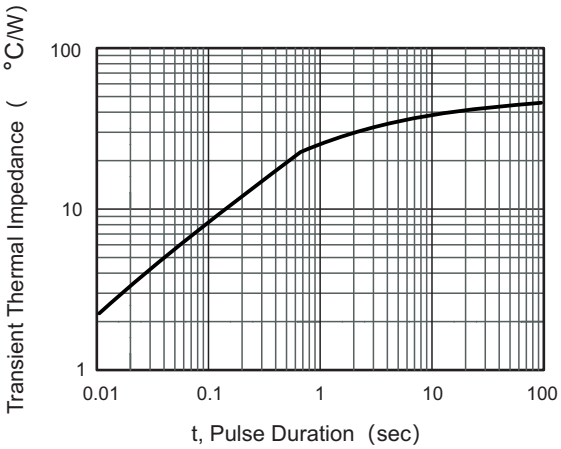


Fig.6- Typical Transient Thermal Impedance



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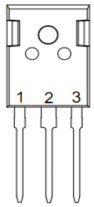
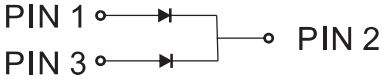
Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

Marking

Type number	Marking code
MBR3040PT	MBR3040PT
MBR3045PT	MBR3045PT
MBR3060PT	MBR3060PT
MBR30100PT	MBR30100PT
MBR30150PT	MBR30150PT
MBR30200PT	MBR30200PT