

Pb Free Plating Product

MBR1635 thru MBR16150



16.0 Ampere Heatsink Type Single Schottky Barrier Rectifiers

<p><b>Features</b></p> <ul style="list-style-type: none"> <li>※ Low power loss, high efficiency</li> <li>※ Guardring for overvoltage protection</li> <li>※ High surge current capability</li> <li>※ Compliant to RoHS Directive 2011/65/EU and WEEE 2002/96/EC</li> <li>※ Halogen-free according to IEC 61249-2-21 definition(Order Note)</li> </ul> <p><b>Application</b></p> <ul style="list-style-type: none"> <li>※ Automotive Inverters and Solar Inverters</li> <li>※ Car Audio Amplifiers and Sound Device Systems</li> <li>※ Plating Power Supply, Motor Control, UPS and SMPS etc.</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>※ Case: Heat sink TO-220AC</li> <li>※ Epoxy: UL 94V-0 rate flame retardant</li> <li>※ Terminals: Solderable per MIL-STD-202 method 208</li> <li>※ Polarity: As marked on diode body</li> <li>※ Mounting position: Any</li> <li>※ Weight: 2.0 gram approximately</li> </ul>	<p>TO-220AC/TO-220-2L <span style="float: right;">Unit:inch(mm)</span></p>
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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)									
PARAMETER	SYMBOL	MBR1635	MBR1645	MBR1650	MBR1660	MBR1690	MBR16100	MBR16150	UNIT
Maximum repetitive peak reverse voltage	VRRM	35	45	50	60	90	100	150	V
Maximum RMS voltage	VRMS	24	31	35	42	63	70	105	V
Maximum DC blocking voltage	VDC	35	45	50	60	90	100	150	V
Maximum average forward rectified current	IF(AV)	16							A
Peak repetitive forward current (Rated VR, Square Wave, 20KHz)	IFRM	32							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	IFSM	150							A
Peak repetitive reverse surge current (Note 1)	IRRM	1.0			0.5				A
Maximum instantaneous forward voltage (Note 2) IF=16A, TJ=25°C IF=16A, TJ=125°C	VF	0.63 0.57		0.75 0.65		0.85 0.75		0.95 0.92	
Maximum reverse current @ rated VR TJ=25°C TJ=125°C	IR	0.5 15		0.5 10		0.3 7.5		0.1 5	
Voltage rate of change (Rated VR)	dV/dt	10000							V/μs
Typical thermal resistance	RθJC	3							°C/W
Operating junction temperature range	TJ	- 55 to +150							°C
Storage temperature range	TSTG	- 55 to +150							°C

Note 1: tp = 2.0 μs, 1.0KHz  
 Note 2: Pulse test with PW=300μs, 1% duty cycle

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1- FORWARD CURRENT DERATING CURVE

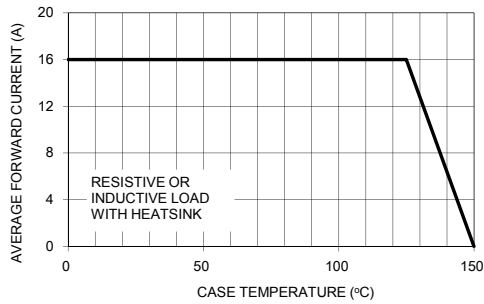


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

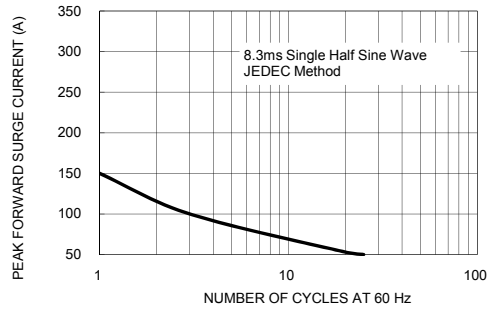


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

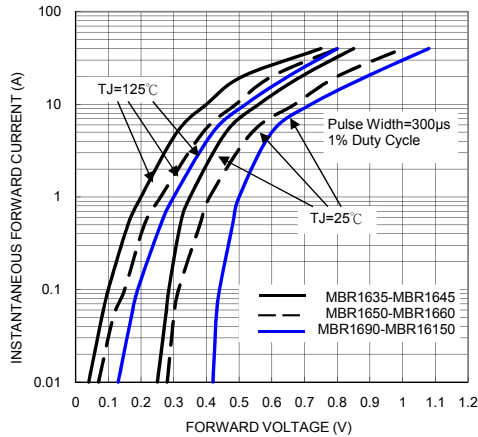


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

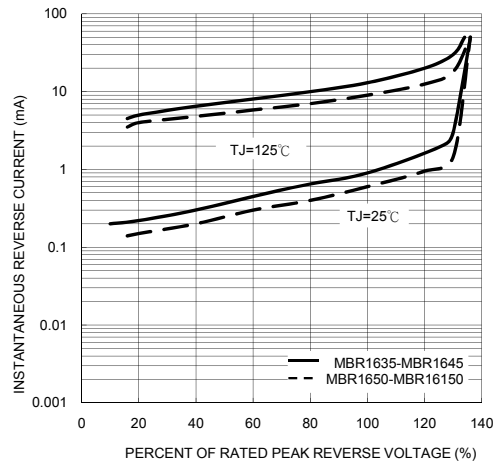


FIG. 5- TYPICAL JUNCTION CAPACITANCE

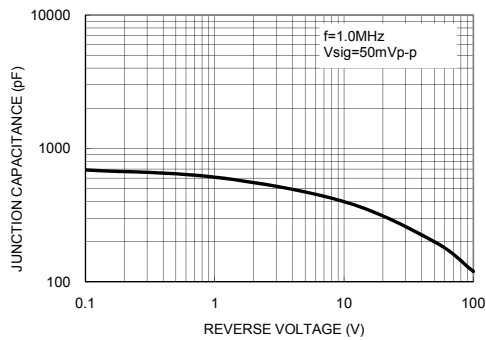


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

