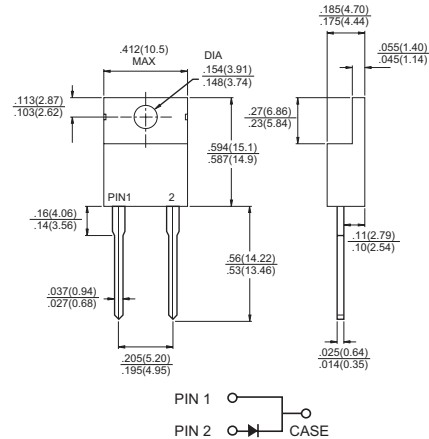


Features

- ✧ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ✧ Metal silicon rectifier, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case

Mechanical Data

- ✧ Cases: JEDEC TO-220AC molded plastic body
- ✧ Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs. max
- ✧ Weight: 0.08 ounce, 2.24 grams



Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	MBR 735	MBR 745	MBR 750	MBR 760	MBR 790	MBR 7100	MBR 7150	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	150	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	105	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	150	V
Maximum Average Forward Rectified Current See Fig. 1	I _(AV)	7.5							A
Peak Repetitive Forward Current (Square Wave, 20KHz) at Tc=105°C	I _{FRM}	15.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	150							A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1.0		0.5					A
Maximum Instantaneous Forward Voltage at (Note 2) I _F =7.5A,Tc=25°C I _F =7.5A,Tc=125°C I _F =15A,Tc=25°C I _F =15A,Tc=125°C	V _F	— 0.57 0.84 0.72		0.75 0.65 — —		0.92 0.82 — —		0.95 0.92 — —	V
Maximum Instantaneous Reverse Current @ Tc =25 °C at Rated DC Blocking Voltage (Note 1) @ Tc=125 °C	I _R	0.1 15.0		0.1 10		0.1 5.0			mA mA
Voltage Rate of Change (Rated V _R)	dv/dt	10,000							V/uS
Typical Junction Capacitance	C _j	360		280		200		160	pF
Maximum Thermal Resistance, (Note 3)	R _{θJC} R _{θJA}	5.0 15.0							°C/W
Operating Junction Temperature Range	T _J	-65 to +150							°C
Storage Temperature Range	T _{STG}	-65 to +175							°C

Notes:
1. 2.0us Pulse Width, f=1.0 KHz
2. Pulse Test: 300us Pulse Width, 1% Duty Cycle
3. Mounted on Heatsink Size of 2 in x 3 in x 0.25 in Al-Plated.



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FIG.1- FORWARD CURRENT DERATING CURVE

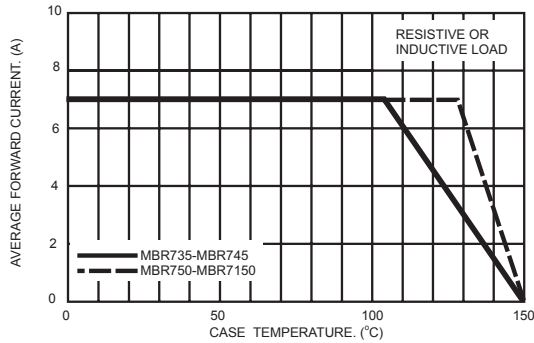


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

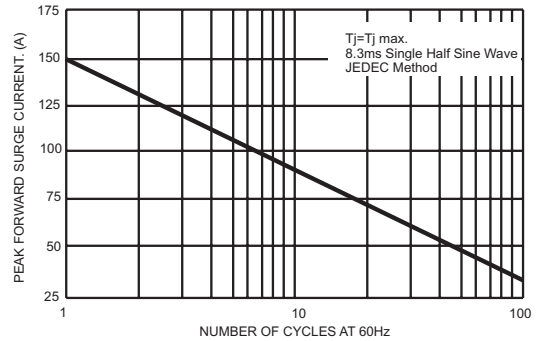


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

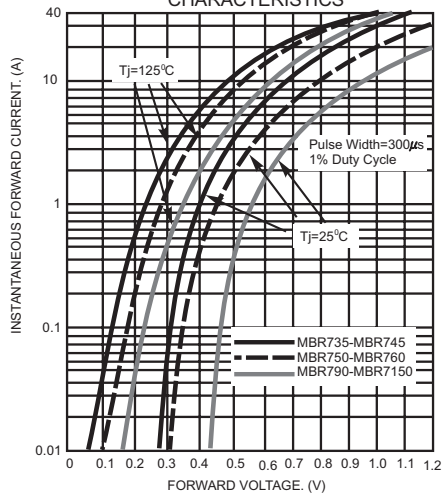


FIG.4- TYPICAL REVERSE CHARACTERISTICS

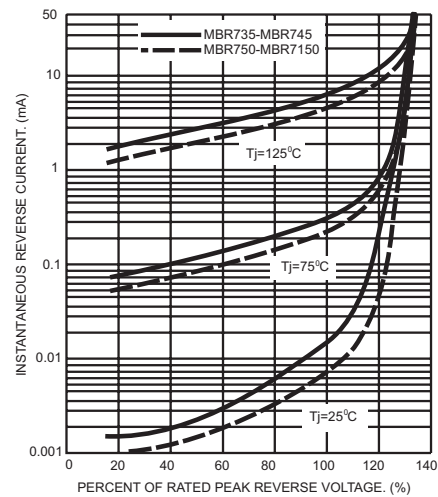


FIG.5- TYPICAL JUNCTION CAPACITANCE

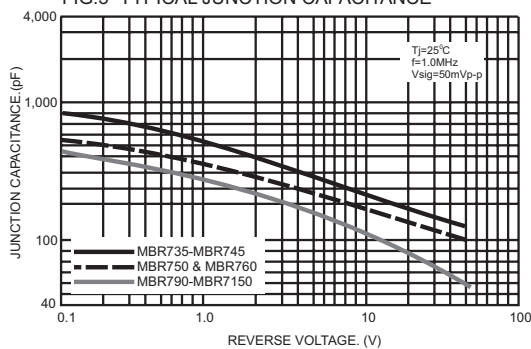


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

