

Pb Free Plating Product

MBR2035CA thru MBR20200CA



20.0 Ampere Dual Common Anode Schottky Barrier Rectifiers

Features

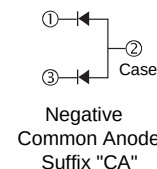
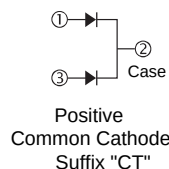
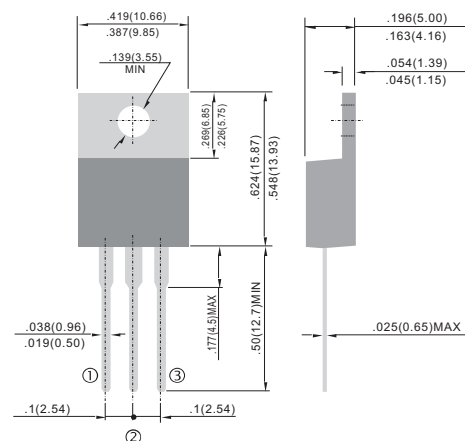
- ✧ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters, 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-220AB molded plastic
- ✧ 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: 2.1 gram approximately

TO-220AB

Unit : inch (mm)



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 2035 CA	MBR 2045 CA	MBR 2050 CA	MBR 2060 CA	MBR 2090 CA	MBR 20100 CA	MBR 20150 CA	MBR 20200 CA	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	150	200	V
Maximum Average Forward Rectified Current	I _{F(AV)}	20								A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz)	I _{FRM}	20								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) IF=10A, T _A =25℃ IF=10A, T _A =125℃ IF=20A, T _A =25℃ IF=20A, T _A =125℃	V _F	-		0.80		0.85		0.99		V
		0.57		0.70		0.75		0.87		
		0.84		0.95		0.95		1.23		
		0.72		0.85		0.85		1.10		
Maximum Instantaneous Reverse Current @ T _A =25℃ at Rated DC Blocking Voltage @ T _A =125℃	I _R	0.1								mA
		15		10		5			0.15	mA
Voltage Rate of Change (Rated V _R)	dV/dt	10000								V/μs
Typical Junction Capacitance	C _j	400		320						pF
Typical Thermal Resistance Per Leg	R _{θJC}	1.0				2.0				℃/W
Operating Temperature Range	T _J	- 65 to + 150								℃
Storage Temperature Range	T _{STG}	- 65 to + 175								℃

Note 1: 2.0μS Pulse Width, f=1.0KHz

Note 2: Pulse Test : 300μS Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (MBR2035CA thru MBR20200CA)

FIG. 1- FORWARD CURRENT DERATING CURVE

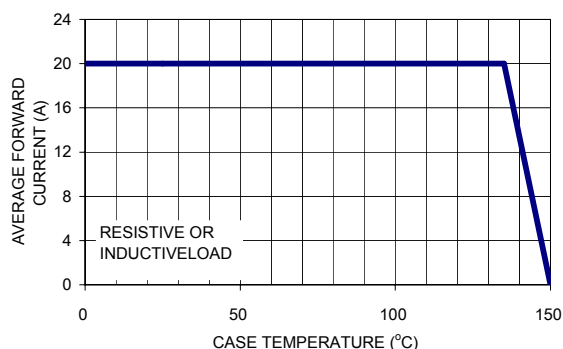


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

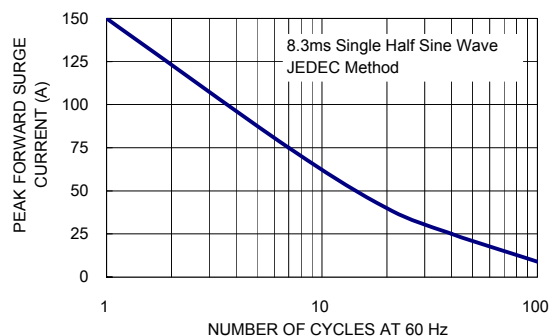


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

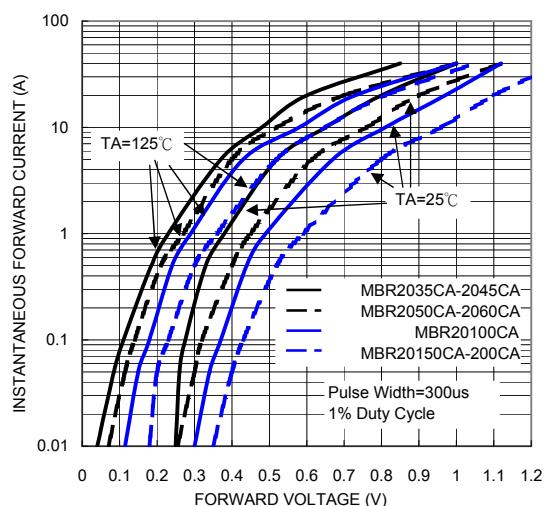


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

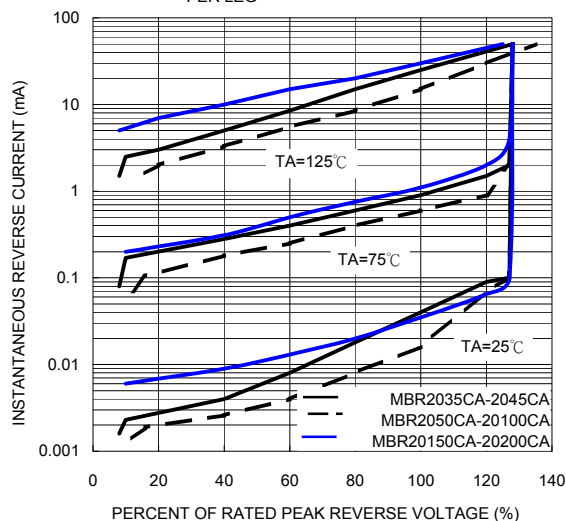


FIG. 5- TYPICAL JUNCTION CAPACITANCE

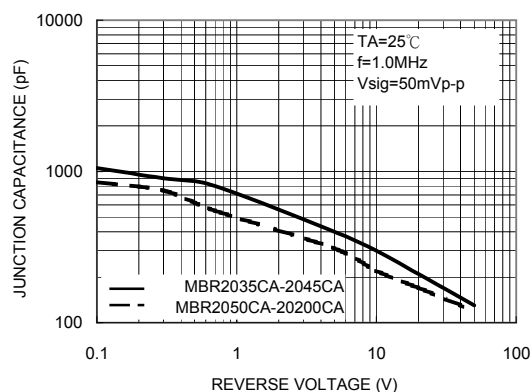


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

