

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed:260 °C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC



### TO-220AB



### TO-263 D2PAK



### MECHANICAL DATA

- Case: JEDEC TO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08ounce, 2.24 grams

Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

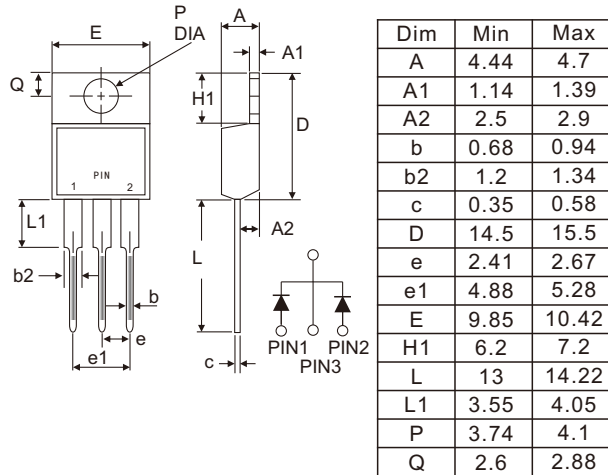
(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

	Symbols	MBR 3020CT	MBR 3030CT	MBR 3040CT	MBR 3045CT	MBR 3060CT	MBR 3080CT	MBR 30100CT	MBR 30150CT	MBR 30200CT	Units
Maximum repetitive peak reverse voltage	VRRM	20	30	40	45	60	80	100	150	200	Volts
Maximum RMS voltage	VRMS	14	21	28	32	42	56	70	105	140	Volts
Maximum DC blocking voltage	VDC	20	30	40	45	60	80	100	150	200	Volts
Maximum average forward rectified current(see Fig.1)	Per leg	15.0									Amps
	Total device	30.0									
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	250.0									Amps
Maximum instantaneous forward voltage at 30.0 A	VF	0.60			0.75		0.85		0.95		Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	Tc = 25°C	0.2									mA
	Tc = 125°C	30			50						
Typical thermal resistance (Note 2)	RθJC	3.0									°C/W
Operating junction temperature range	TJ	-65 to +150									°C
Storage temperature range	TSTG	-65 to +150									°C

- Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle  
2.Thermal resistance from junction to case

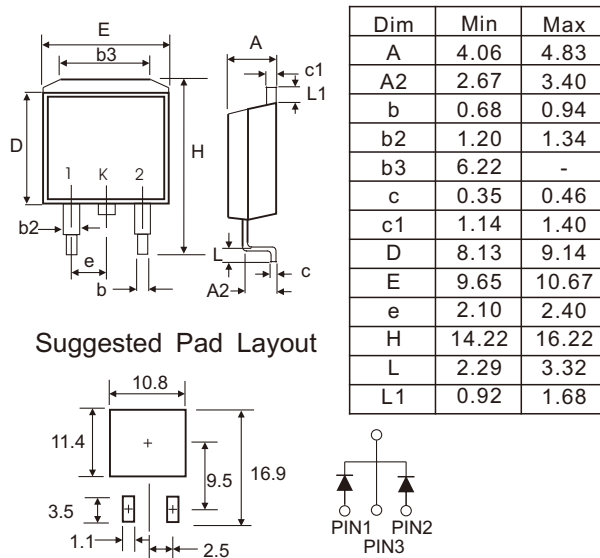
# CASE OUTLINE OF MBR3020CT THRU MBR30200CT

## TO-220AB

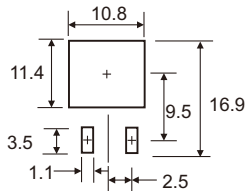


Dimensions in millimeters

## TO-263 D2PAK



Suggested Pad Layout



Dimensions in millimeters

# RATINGS AND CHARACTERISTIC CURVES MBR3020CT-MBR30200CT

FIG.1-FORWARD CURRENT DERATING CURVE

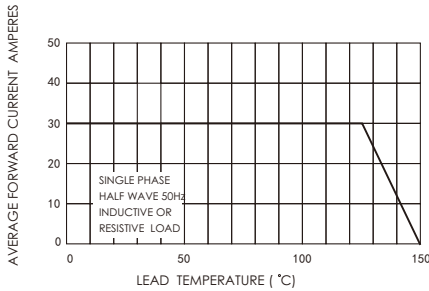


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER DIODE

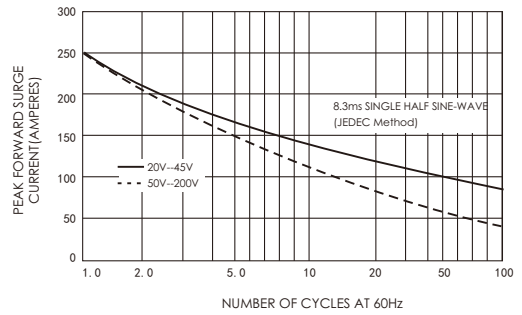


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

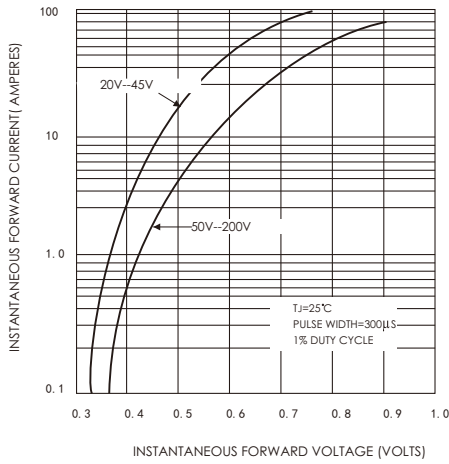


FIG.4-TYPICAL REVERSE CHARACTERISTICS

