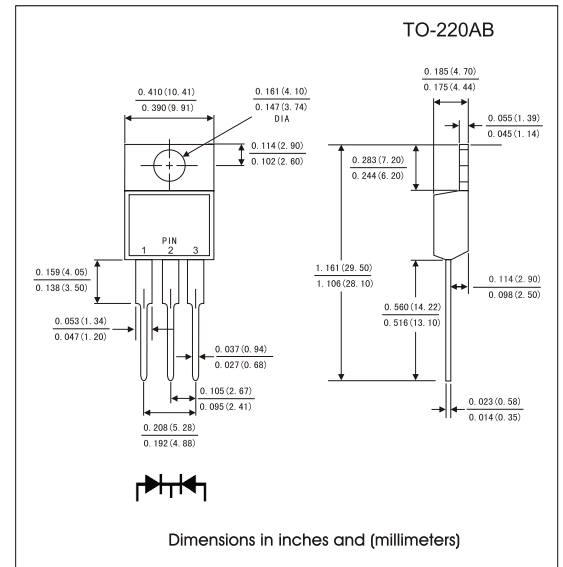


## SCHOTTKY BARRIER RECTIFIER

### FEATURES

- High Performance and Reliability best suited for Automotive application
- 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
- Dual rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling , and polarity protection applications
- High temperature soldering guaranteed:260 °C/10 seconds, 0.25" (6.35 mm) from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



### 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

### 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 2020CT	MBR 2030CT	MBR 2040CT	MBR 2045CT	MBR 2060CT	MBR 2080CT	MBR 20100CT	MBR 20150CT	MBR 20200CT	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	45	60	80	100	150	200	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	32	42	56	70	105	140	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	45	60	80	100	150	200	Volts
Maximum average forward rectified current (see Fig.1)	$I_{(AV)}$	Per leg									Amps
		Total device									
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load JEDEC method	$I_{FSM}$	10.0 20.0									Amps
Maximum Instantaneous Forward Voltage at 20.0 A	$V_F$	0.60			0.75	0.85	0.90	0.95			Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$I_R$	0.2									mA
		30			50						
Typical thermal resistance (Note 3)	$R_{\theta JC}$	3.0									°C/W
Operating junction and storage temperature range	$T_J/T_{STG}$	-65 to +150									°C

#### Notes:

- Pulse test: 300  $\mu$ s pulse width 1% duty cycle
- Thermal resistance from junction to case

## SCHOTTKY BARRIER RECTIFIER

### RATINGS AND CHARACTERISTIC CURVES MBR2020CT - MBR20200CT

FIG.1-FORWARD CURRENT DERATING CURVE

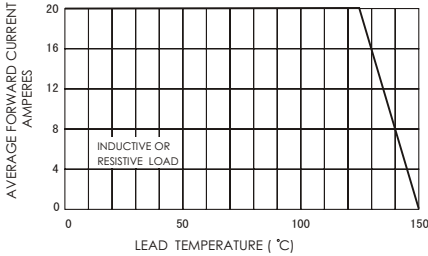


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

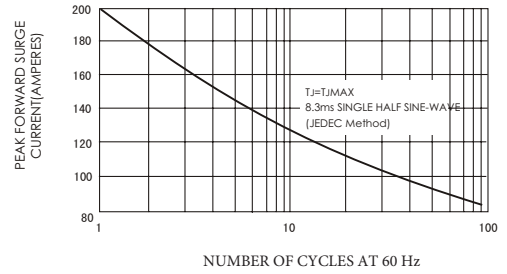


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

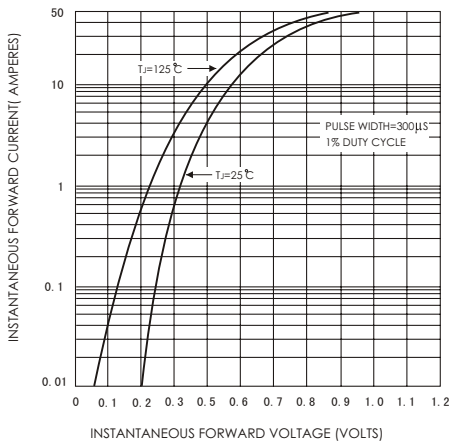


FIG.4-TYPICAL REVERSE CHARACTERISTICS

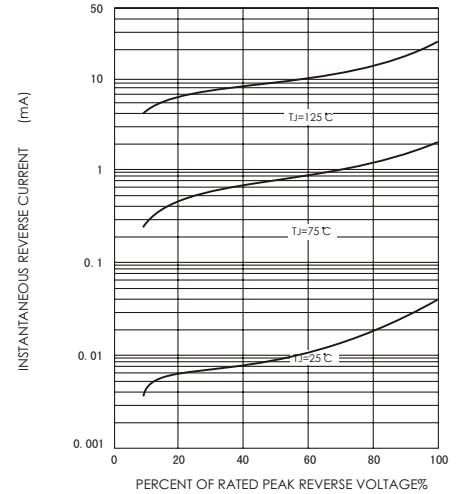


FIG.5-TYPICAL JUNCTION CAPACITANCE

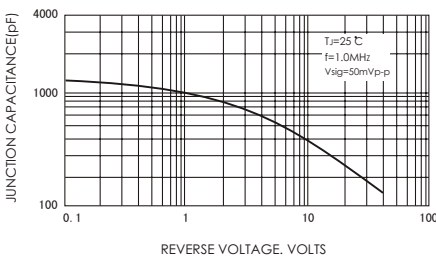
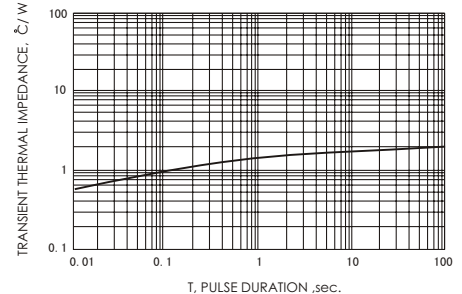


FIG.6-TYPICAL TRANSIENTS THERMAL IMPEDANCE



#### Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.