MBR3020CT THRU MBR30100CT

Reverse Voltage - 20 to 100 Volts Forward Current - 30.0 Ampere

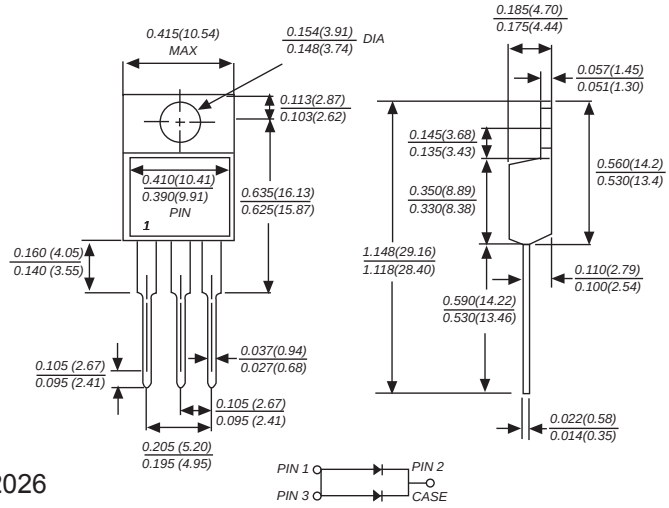
SCHOTTKY BARRIER RECTIFIER

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250°C,0.25"(6.35mm) from case for 10 seconds

TO-220AB

RoHS COMPLIANT



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC TO-220AB Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.080 ounce, 2.24 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unlss otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter	SYMBOLS	MBR 3020CT	MBR 3030CT	MBR 3040CT	MBR 3045CT	MBR 3050CT	MBR 3060CT	MBR 3070CT	MBR 3080CT	MBR 3090CT	MBR 30100CT	UNITS
Marking Code		MDD MBR 3020CT	MDD MBR 3030CT	MDD MBR 3040CT	MDD MBR 3045CT	MDD MBR 3050CT	MDD MBR 3060CT	MDD MBR 3070CT	MDD MBR 3080CT	MDD MBR 3090CT	MDD MBR 30100CT	
Maximum repetitive peak reverse voltage	V_{RMM}	20	30	40	45	50	60	70	80	90	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	32	35	42	49	56	63	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	45	50	60	70	80	90	100	V
Maximum average forward rectified current (see fig.1)	$I_{(AV)}$	30.0										A
Peak forward surge current 8.3ms single half sine-wave	I_{FSM}	250										A
Maximum instantaneous forward voltage at 15.0A	V_F	0.55				0.75		0.85				V
Maximum DC reverse current T_A=25℃	I_R	1.0										mA
at rated DC blocking voltage T_A=100℃		15.0				50.0						
Typical junction capacitance (NOTE 1)	C_J	750				500						pF
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	2.0										℃/W
Operating junction temperature range	T_J	-65 to +125				-65 to +150						℃
storage temperature range	T_{STG}	-65 to +150										℃

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.Thermal resistance from junction to case.

Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

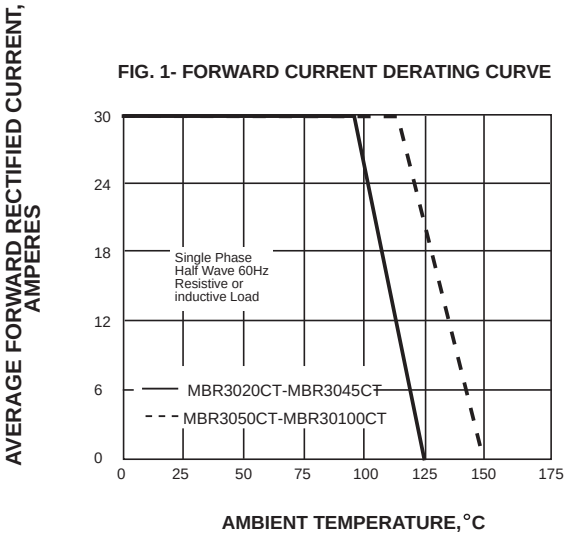


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

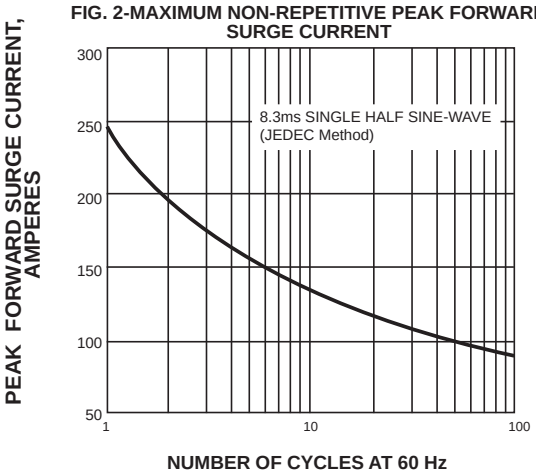


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

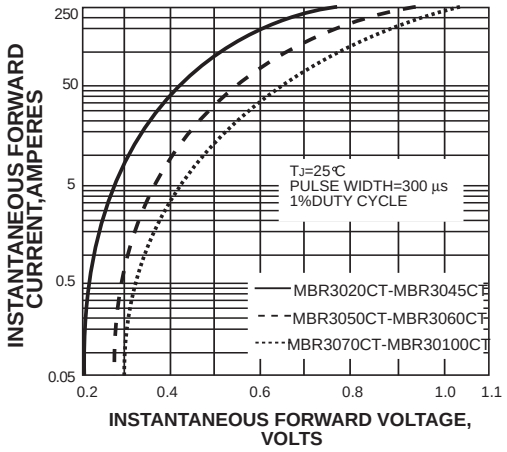


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

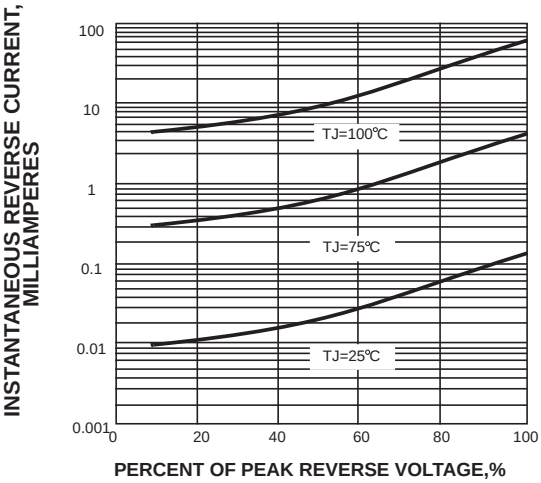


FIG. 5-TYPICAL JUNCTION CAPACITANCE

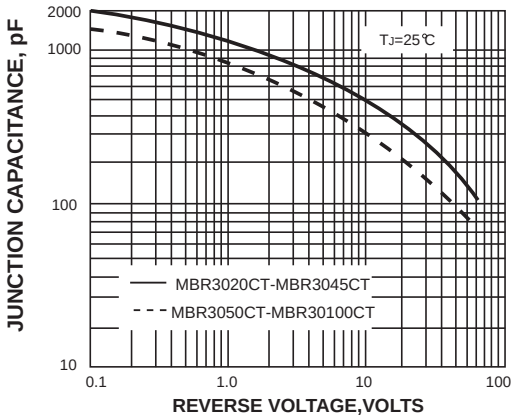
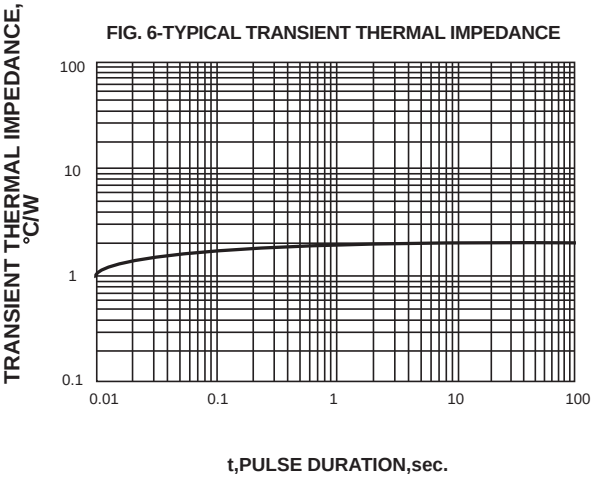


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.