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

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

Dimensions in inches and (millimeters)
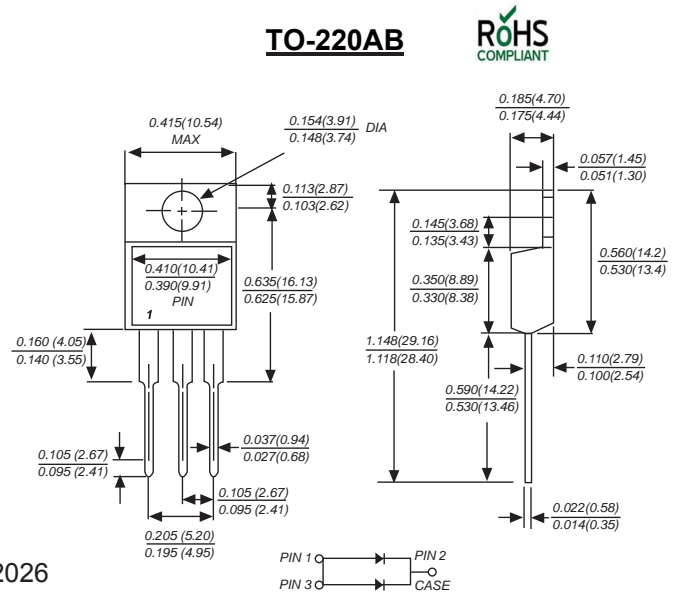
Maximum Ratings And Electrical Characteristics

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℃ at rated DC blocking voltage	I_R	1.0										mA
T_A=100℃		15.0				50.0						
Typical junction capacitance (NOTE 1)	C_J	750				500						pF
Typical thermal resistance (NOTE 2)	$R_{θJC}$	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.
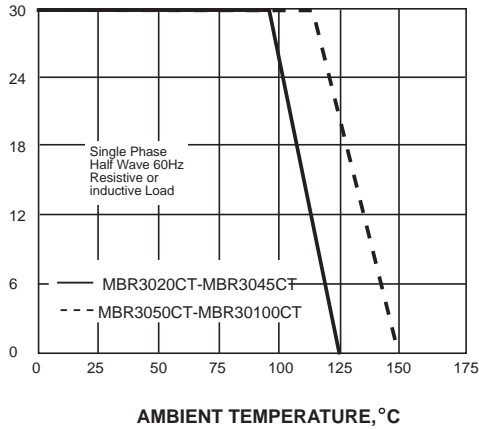
2.Thermal resistance from junction to case.

Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

Single Phase Half Wave 60Hz Resistive or inductive Load

MBR3020CT-MBR3045CT
MBR3050CT-MBR30100CT

AMBIENT TEMPERATURE,°C

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

PEAK FORWARD SURGE CURRENT, AMPERES

8.3ms SINGLE HALF SINE-WAVE (JEDEC Method)

NUMBER OF CYCLES AT 60 Hz
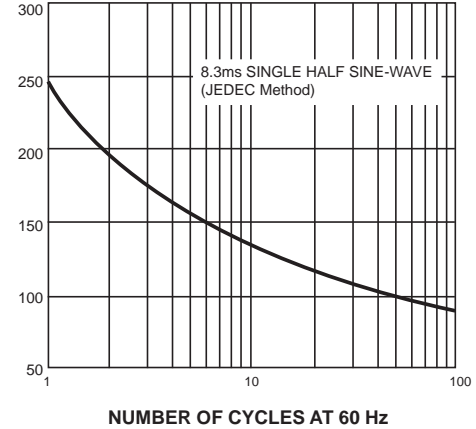
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT,AMPERES

T_J=25℃
PULSE WIDTH=300 μs
1%DUTY CYCLE

MBR3020CT-MBR3045CT
MBR3050CT-MBR3060CT
MBR3070CT-MBR30100CT

INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG. 4-TYPICAL REVERSE CHARACTERISTICS
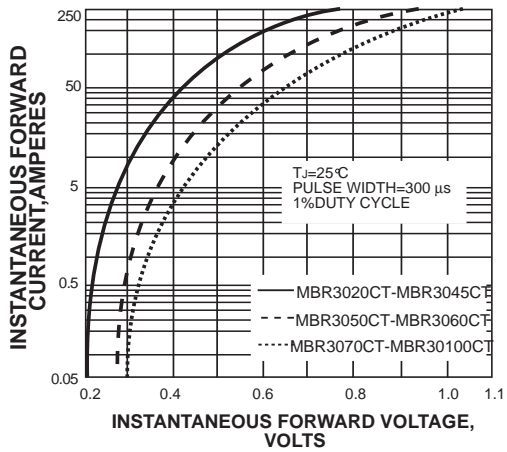
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

T_J=100℃
T_J=75℃
T_J=25℃

PERCENT OF PEAK REVERSE VOLTAGE,%

FIG. 5-TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE, pF

T_J=25℃

MBR3020CT-MBR3045CT
MBR3050CT-MBR30100CT

REVERSE VOLTAGE,VOLTS
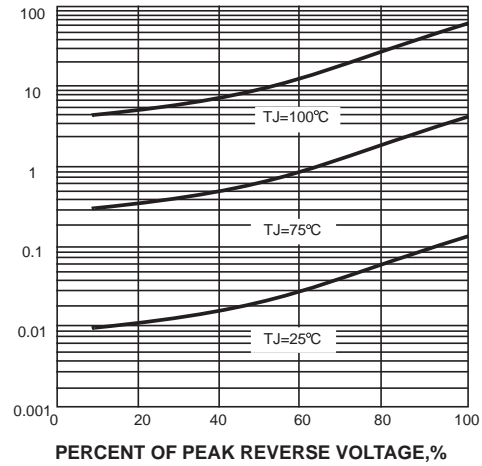
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE
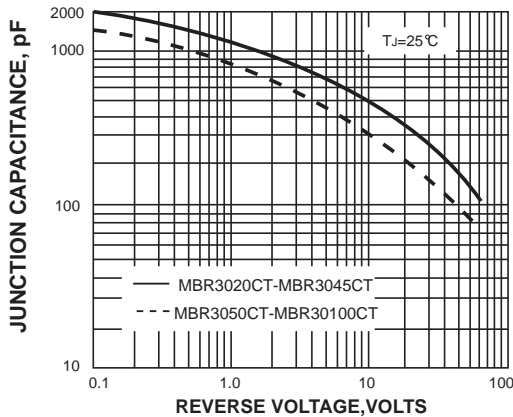
TRANSIENT THERMAL IMPEDANCE, °C/W

t,PULSE DURATION,sec.
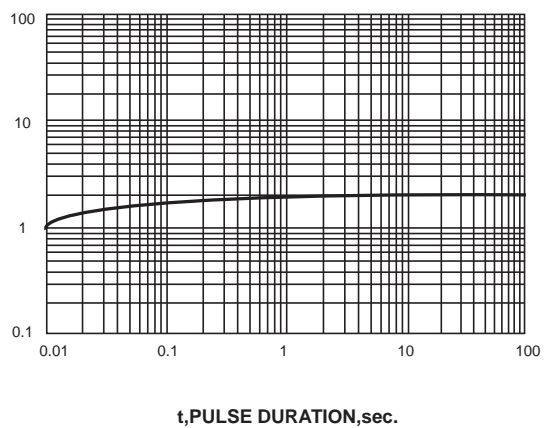
The curve above is for reference only.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Schottky Diodes & Rectifiers *category:*

Click to view products by Microdiode Electronics *manufacturer:*

Other Similar products are found below :

CUS06(TE85L,Q,M) MA4E2039 D1FH3-5063 MBR0530L-TP MBR10100CT-BP MBR30H100MFST1G MMBD301M3T5G PMAD1103-LF PMAD1108-LF RB160M-50TR RB520S-30 RB551V-30 DD350N18K DZ435N40K DZ600N16K BAS16E6433HTMA1 BAS 3010S-02LRH E6327 BAT 54-02LRH E6327 IDL02G65C5XUMA1 NSR05F40QNXT5G JANS1N6640 SB07-03C-TB-H SB1003M3-TL-W SBAT54CWT1G SK32A-LTP SK33A-TP SK34A-TP SK34B-TP SMD1200PL-TP ACDBN160-HF SS3003CH-TL-E STPS30S45CW PDS3100Q-7 GA01SHT18 CRS10I30A(TE85L,QM MA4E2501L-1290 MBR1240MFST1G MBRB30H30CT-1G BAS28E6433HTMA1 BAS 70-02L E6327 HSB123JTR-E JANTX1N5712-1 VS-STPS40L45CW-N3 DD350N12K SB007-03C-TB-E SK110-LTP SK154-TP SK32A-TP SK33B-TP SK35A-TP