

20A Schottky Barrier Rectifiers

Features

- Low forward voltage
- Low switching noise
- High current capacity
- Guarantee reverse avalanche
- Guard-ring for stress protection
- Low power loss & high efficiency
- 175° C operating junction temperature
- Low stored charge majority carrier conduction
- RoHS compliant



TO-220



Mechanical Data

Case:	JEDEC TO-220, molded plastic body
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
Polarity	As marked
Mounting Position:	Any
Mounting Torque:	10 in-lbs maximum
Weight:	0.08 ounces, 2.24 grams

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	MBR20 30CT	MBR20 35CT	MBR20 40CT	MBR20 45CT	MBR20 50CT	MBR20 60CT	Unit	Conditions
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	30	35	40	45	50	60	V	
V_{RWM}	Maximum Working Peak Reverse Voltage	30	35	40	45	50	60	V	
V_R	Maximum DC Blocking Voltage	30	35	40	45	50	60	V	
V_{R(RMS)}	RMS Reverse Voltage	21	25	28	32	35	42	V	
I_{F(AV)}	Maximum Average Forward Rectified Current	10						A	Per diode at $T_C=125^{\circ}C$
		20							Total device (rated V_R) at $T_C=125^{\circ}C$
I_{FM}	Peak Repetitive Forward Current	20						A	Rated V_R , square wave, 20KHZ
I_{FSM}	Non-Repetitive Peak Forward Surge Current	200						A	Surge applied at rate load conditions half-wave, single phase, 60HZ
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-65 to +175						$^{\circ}C$	

20A Schottky Barrier Rectifiers

MBR2030CT - MBR2060CT

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	MBR20 30CT	MBR20 35CT	MBR20 40CT	MBR20 45CT	MBR20 50CT	MBR20 60CT	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage per Diode	0.55				0.65		V	IF=10A, Tc=25 °C
		0.48				0.57			IF=10A, Tc=100 °C
I_R	Maximum Instantaneous Reverse Current	0.5						mA	Rated DC Voltage, Tc=25 °C
		20							Rated DC Voltage, Tc=100°C
$R_{\theta JC}$	Typical Thermal Resistance Junction to Case (Note)	3.8						°C/W	Per diode
		3.4							Total
$R_{\theta c}$		3.0							Coupling

Note : Where the diodes 1 and 2 are used simultaneously:

$$\Delta T_J(\text{diode 1}) = P(\text{diode1}) \times R_{\theta(j-c)}(\text{Per diode}) + P(\text{diode2}) \times R_{\theta c}$$

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

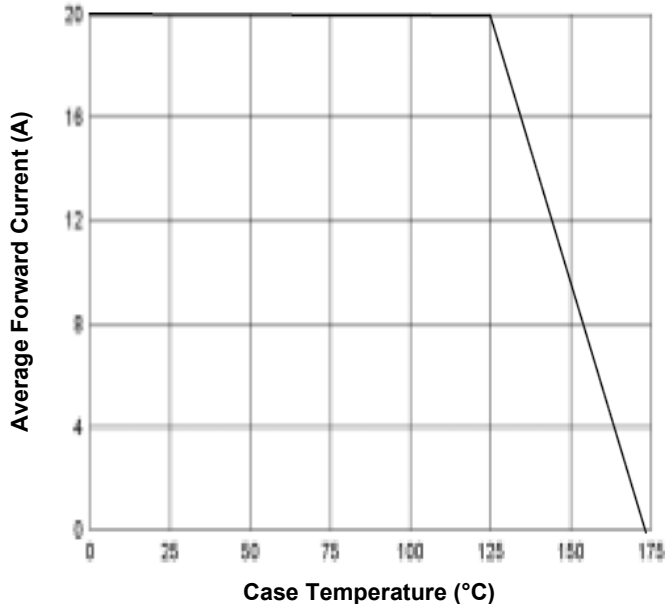
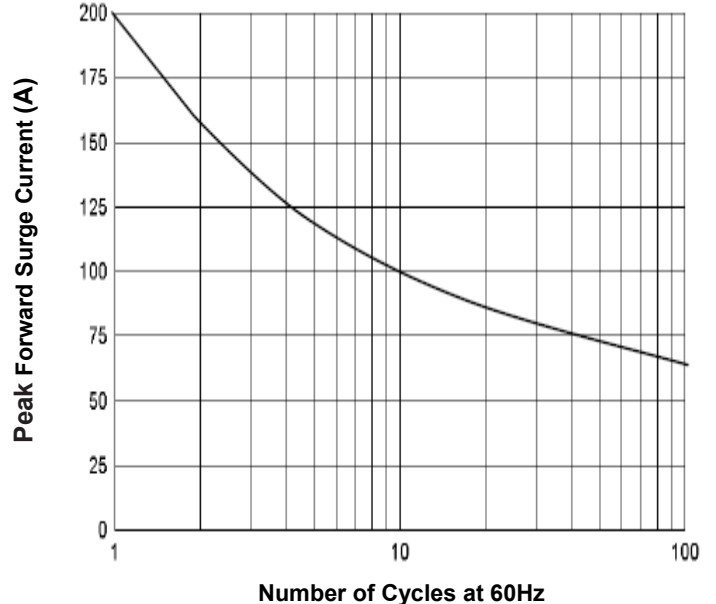


Fig.2- Max. Non-Repetitive Forward Surge Current



20A Schottky Barrier Rectifiers

MBR2030CT - MBR2060CT

Fig.3- Typical Instantaneous Forward Characteristics

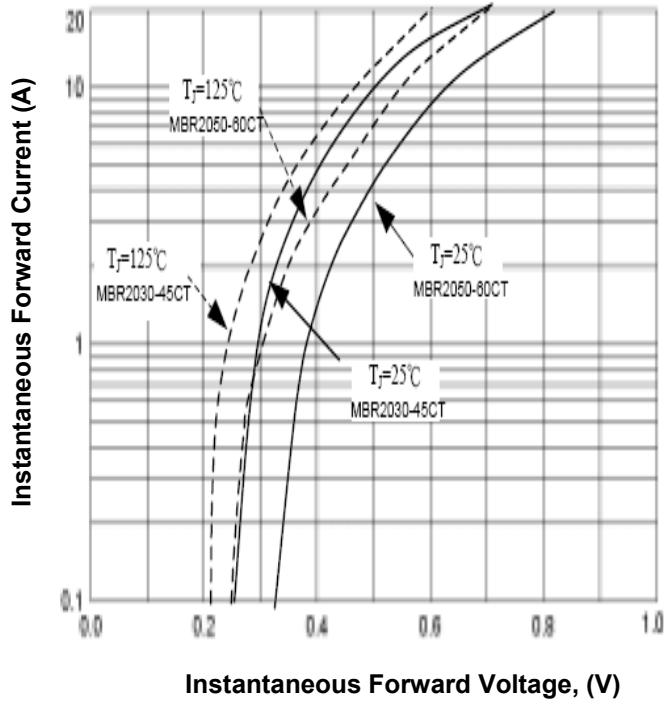


Fig.4- Typical Reverse Characteristics

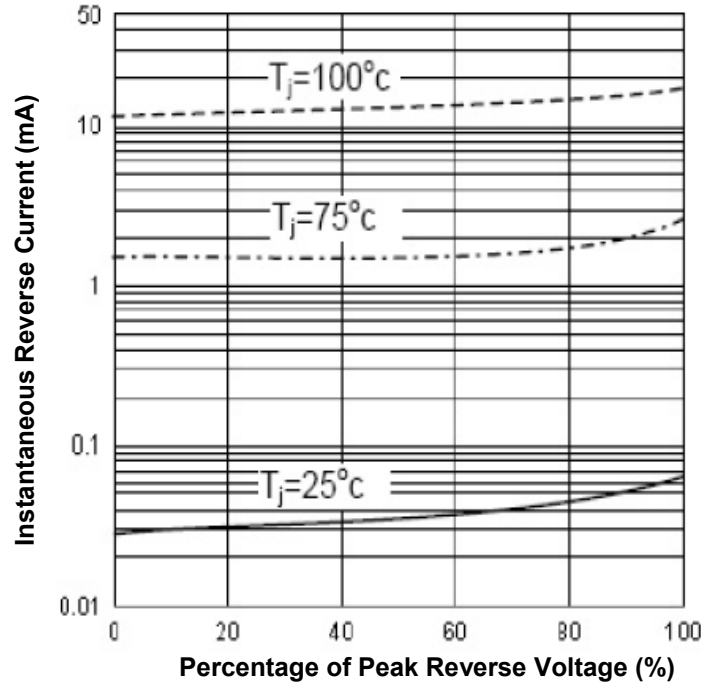
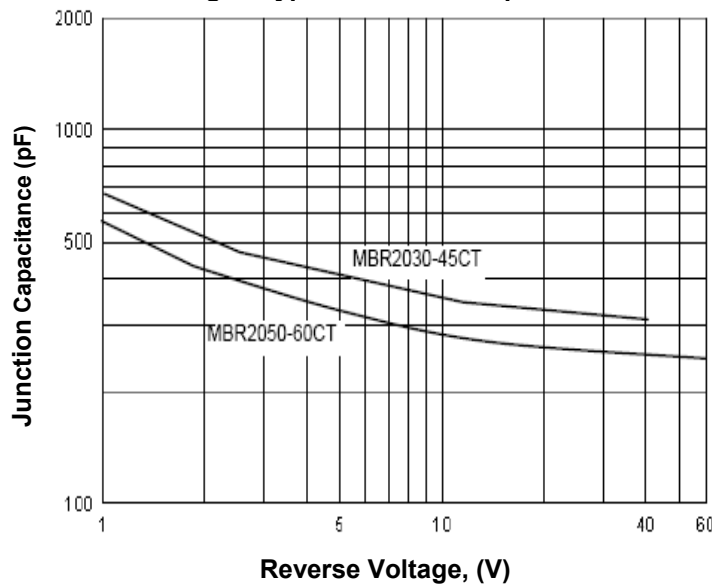


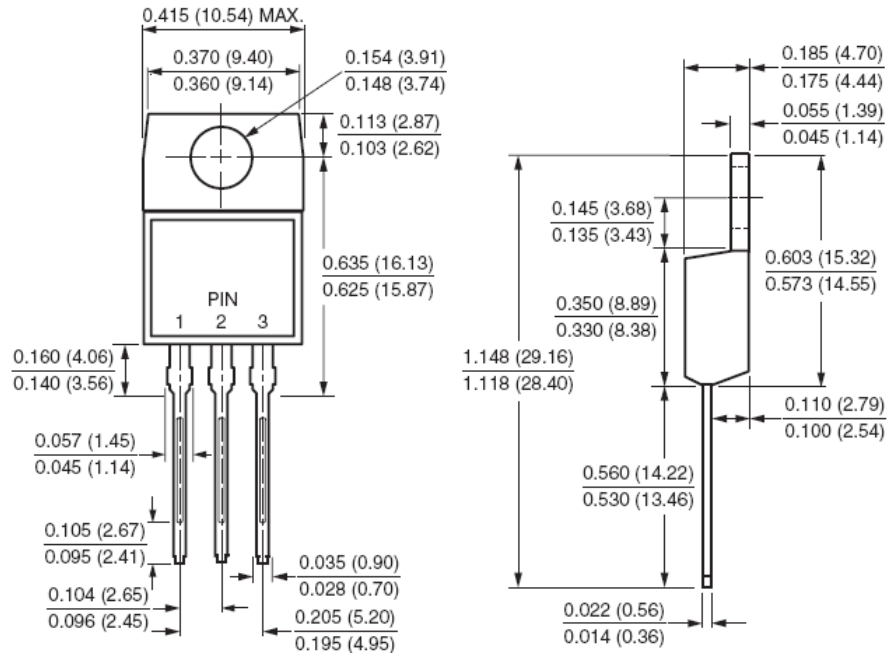
Fig.5- Typical Junction Capacitance



20A Schottky Barrier Rectifiers

MBR2030CT - MBR2060CT

Dimensions in inches (mm)



TO-220

How to contact us:

US HEADQUARTERS

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800) TAITRON (800) 824-8766 (661) 257-6060

Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415

Email: taitron@taitroncomponents.com

Http://www.taitroncomponents.com

TAITRON COMPONENTS MEXICO, S.A .DE C.V.

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P.

42970 MEXICO

Tel: +52-55-5560-1519

Fax: +52-55-5560-2190

TAITRON COMPONENTS INCORPORATED E REPRESENTAÇÕES DO BRASIL LTDA

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001 BRAZIL

Tel: +55-11-5574-7949

Fax: +55-11-5572-0052

TAITRON COMPONENTS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE

METROBANK PLAZA, 1160 WEST YAN' AN ROAD, SUITE 1503, SHANGHAI, 200052, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-5424-9931

TAITRON
components incorporated

Rev. A/AH