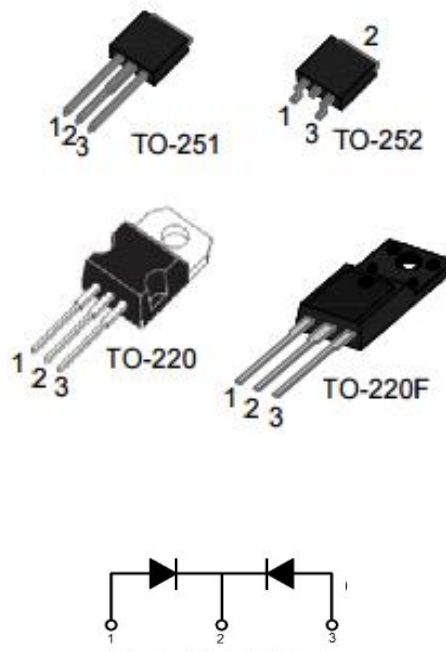


Schottky Barrier series Rectifiers Voltage Range 45 to 200 Volts Current 10.0 Amperes

<p><b>Features</b></p> <ul style="list-style-type: none"> <li>Metal silicon junction, majority carrier conduction</li> <li>Low power loss, high efficiency</li> <li>High current capability, low forward voltage drop</li> <li>High surge capability</li> <li>For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications</li> <li>Guardring for overvoltage protection</li> <li>High temperature soldering guaranteed: 260°C/10 seconds, 0.25" (6.35mm) from case</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>Cases: TO-220 molded plastic body</li> <li>Terminals: Lead solderable per MIL-STD-750, Method 2026</li> <li>Polarity: As marked</li> <li>Mounting position: Any</li> <li>Mounting torque: 5 in. - lbs. max</li> </ul>	 <p style="text-align: center; font-size: small;">1. Anode 2. Cathode 3. Anode</p>
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**Maximum Ratings and Electrical Characteristics**

Type Number	Symbol	MBR 1045CT	MBR 1060CT	MBR 10100CT	MBR 10150CT	MBR 10200CT	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	60	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	31.5	42	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	45	60	100	150	200	V
Maximum Average Forward Rectified Current (Dan Guan)	$I_{(AV)}$	5					A
Maximum Average Forward Rectified Current (double))	$I_{(AV)}$	10					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	120					A
Peak Repetitive Reverse Surge Current (Note 1)	$I_{RRM}$	1		2			A
Voltage Rate of Change (Rated VR)	$dv/dt$	10					V/uS
Maximum Instantaneous Forward Voltage at IF=5A, Tc=25°C	$V_F$	0.65	0.75	0.85	0.90	0.95	V
IF=5A, Tc=125°C		0.55	0.65	0.75	0.80	0.85	V
IF=10A, Tc=25°C		0.90	0.95	1.1	1.2	1.25	V
Maximum Instantaneous Reverse Current @ Tc =25°C at Rated DC Blocking Voltage (Note 2)	$I_R$	100					uA
@ Tc=125°C		15		10		5	mA
Typical Junction Capacitance	$C_j$	18	140	90	75	60	pF
Operating Junction Temperature Range	$T_J$	-50 to +150					°C
Storage Temperature Range	TSTG	-65 to +175					°C

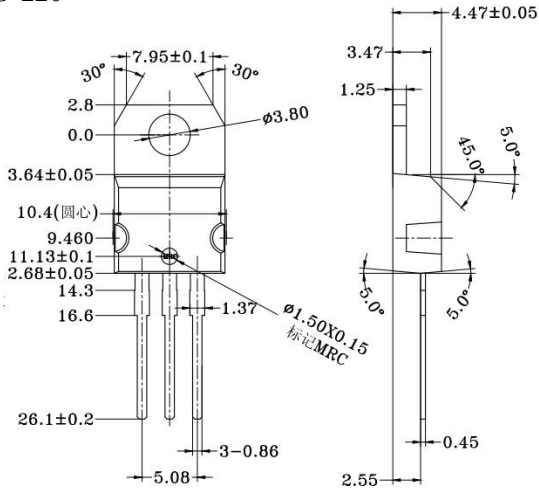
Notes: 1. 2.0us Pulse Width, f=1.0 KHz  
2. Pulse Test: 300us Pulse Width, 1% Duty Cycle

THERMAL RESISTANCES

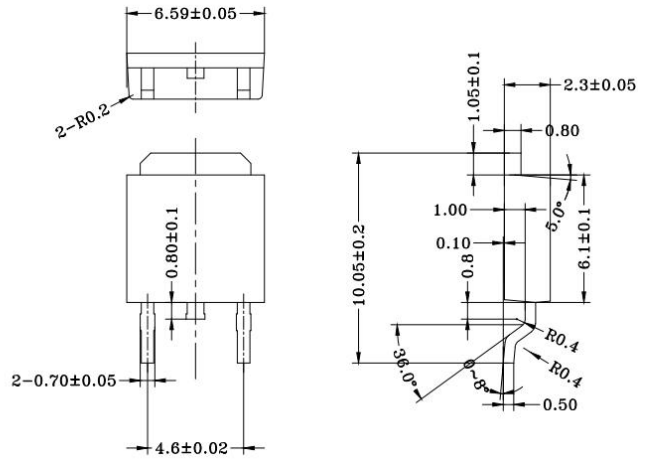
Symbol	Parameter	Value	Unit
Rth(j-c)	junction to case(AC)	TO-251/252	4.2
		TO-220	2.5
		TO-220F	4.5

PACKAGE MECHANICAL DATA

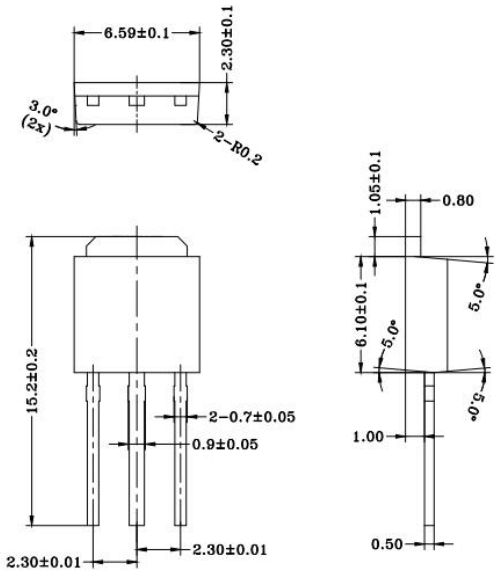
TO-220



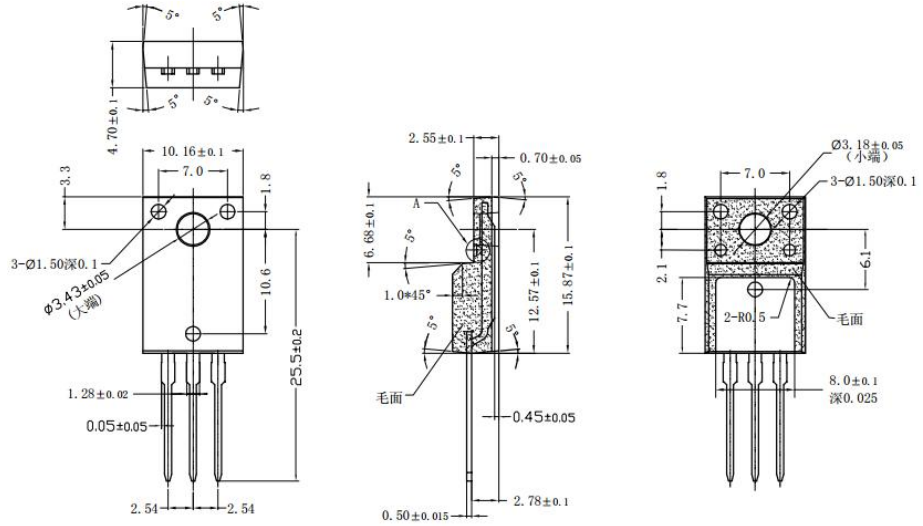
TO-252



TO-251

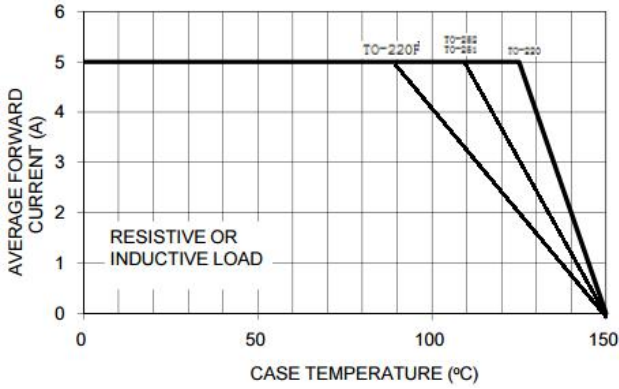


TO-22F

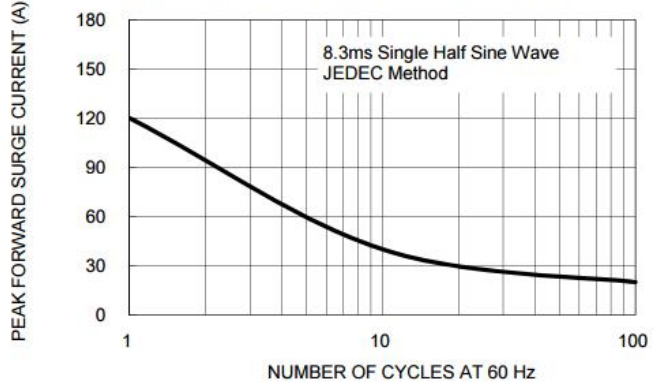


RATINGS AND CHARACTERISTIC CURVES (MBR1045CT THRU MBR10200CT)

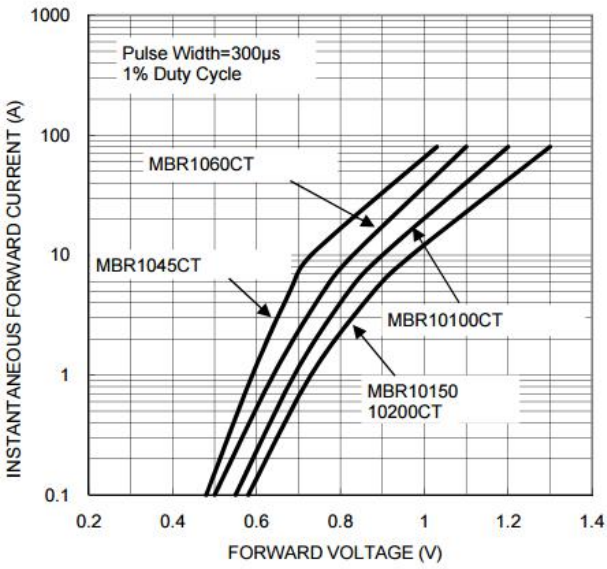
FORWARD CURRENT DERATING CURVE



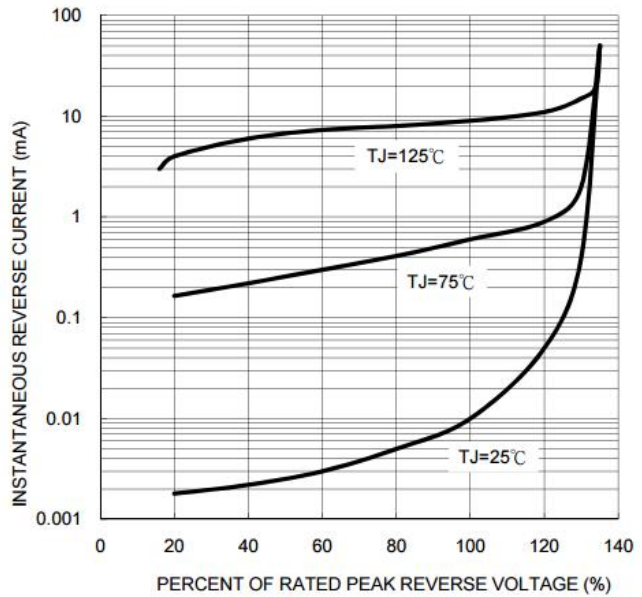
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



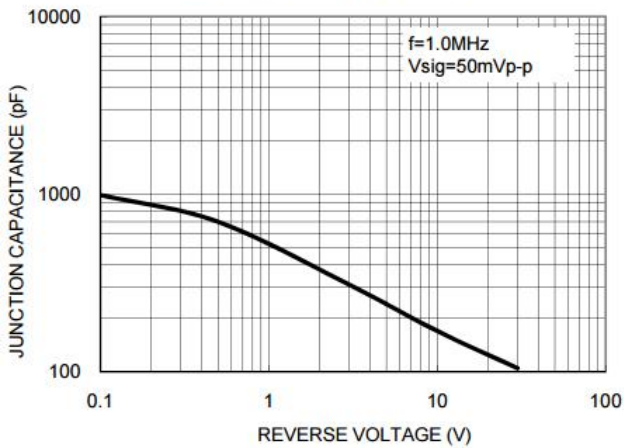
TYPICAL FORWARD CHARACTERISTICS



TYPICAL REVERSE CHARACTERISTICS



TYPICAL JUNCTION CAPACITANCE



TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

