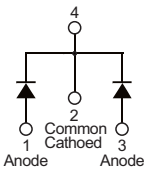
■ PRODUCT CHARACTERISTICS

VR(@IC=0.5mA)	45V
VF(@IF=5A)	0.6V
IR(@VR=45V)	50uA
ID	20A

Symbol

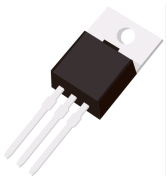


■ MECHANICAL CHARACTERISTICS

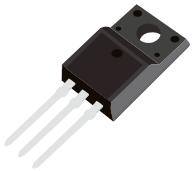
* Case: Epoxy, Molded
* Finish: All External Surfaces Corrosion Resistant and Terminal
* Leads are Readily Solderable
* Lead Temperature for Soldering Purposes:
  260 °C Max. for 10 Seconds

■ FEATURES

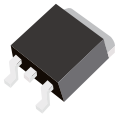
* Guard Ring for Stress Protection
* Low Forward Voltage
* Low Power Loss/High Efficiency
* High Surge Capacity
* Low Stored Charge Majority Carrier Conduction
* Pb Free Packages are Available*



TO-220



TO-220F



TO-263

■ ORDER INFORMATION

Order codes		Package	Packing
Halogen-Free	Halogen		
N/A	MBR2045F	TO-220F	50 pieces/Tube
N/A	MBR2045A	TO-220	50 pieces/Tube
N/A	MBR2045E	TO-263	800 pieces/reel

■MAIMUM RATINGS (Each Diode Leg)

Parameter		Symbol	Value	Unit
Peak Repetitive Reverse Voltage		V_{RRM}	45	V
Average Rectified Output Current	(Total)	I_O	20	A
	(per Leg)		10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Reate Load		I_{FSM}	200	A
Operationg and Storage Temperature Range		T_J,T_{STG}	-55 to + 175	°C

■ ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Test Conditions	Min	Typ.	Max	Unit
Peak Repetitive Reverse Voltage	B_V	I_c=0.5mA T_J=25°C	–	45	–	V
Forward Voltage Drop	V_F	I_F=10A,T_J=25°C	–	0.57	0.6	V
Leakage Current	I_R	V_R=45V, T_J=25°C	–	–	0.05	mA
		V_R=45V, T_J=125°C	–	–	6	

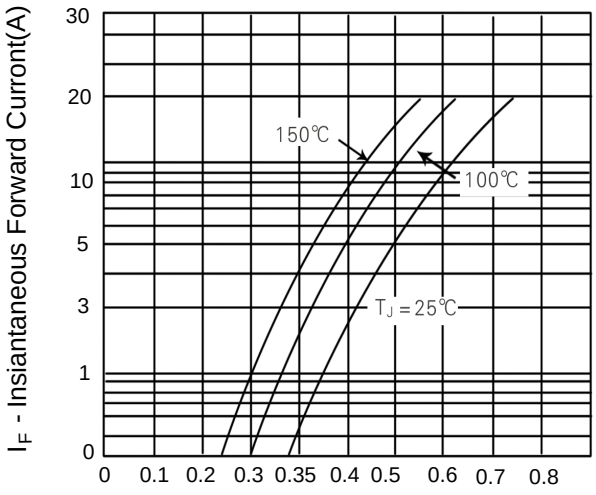


Figure 1. Typical Forward Voltage Per Diode

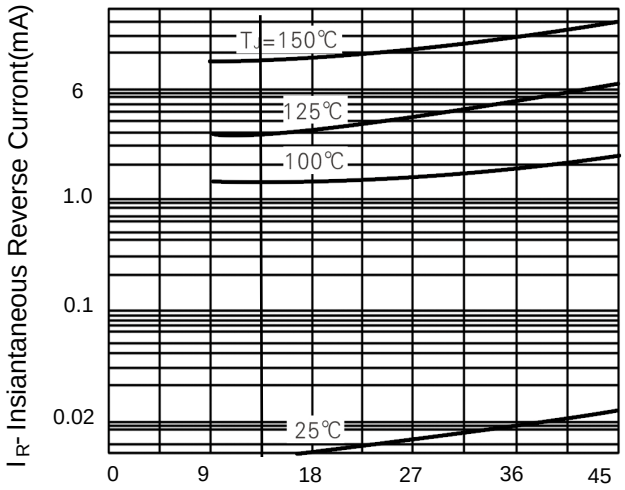
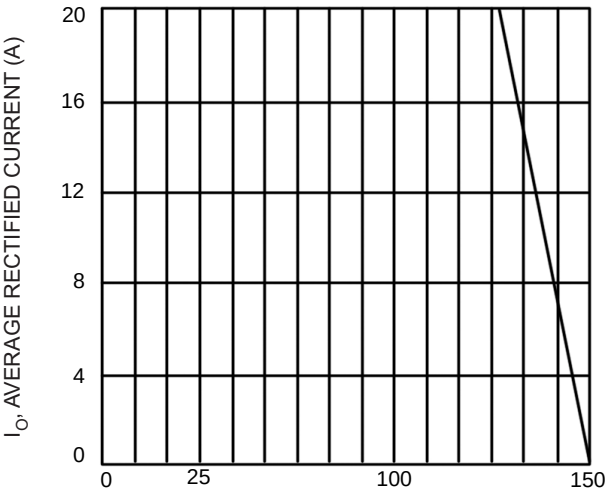
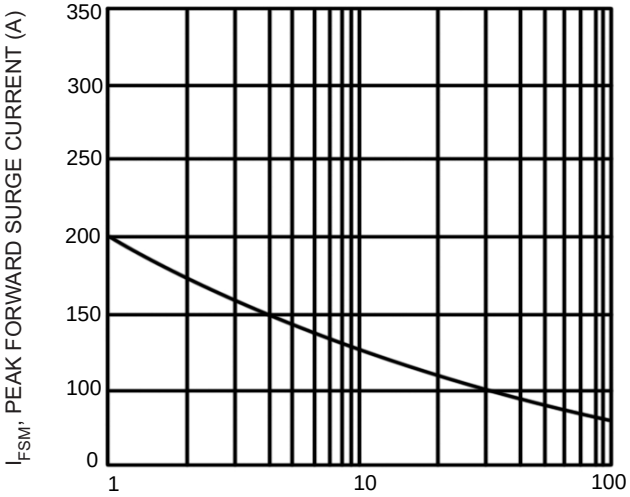


Figure 2. Typical Reverse Current Per Diode

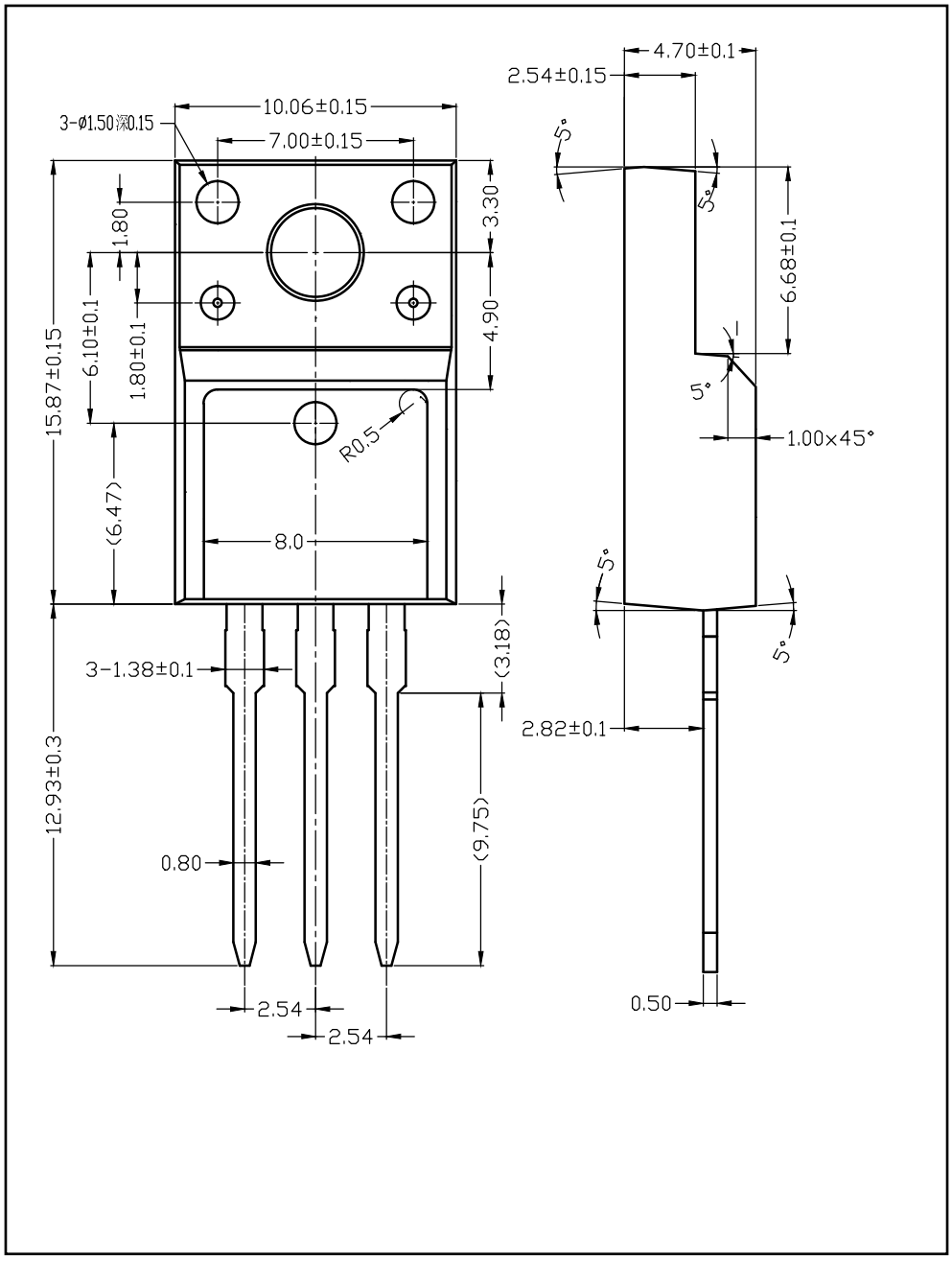


T_C,CASE TEMPERATURE(˚C)
Fig.3 Forward Current Derating Curve

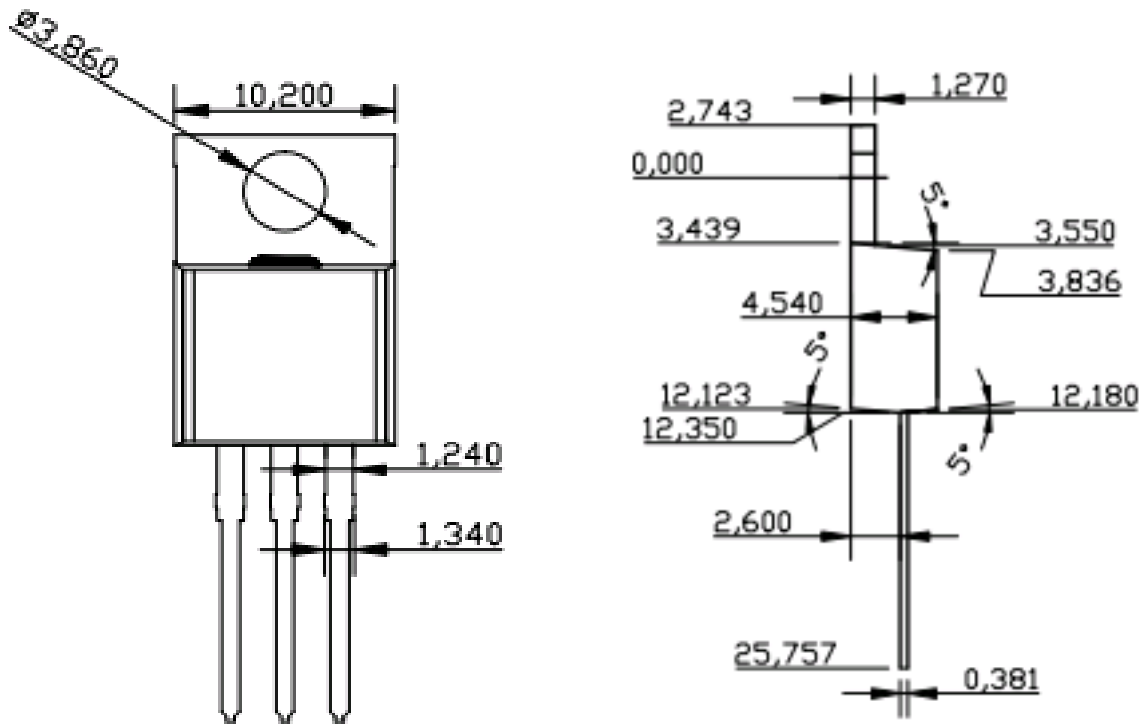
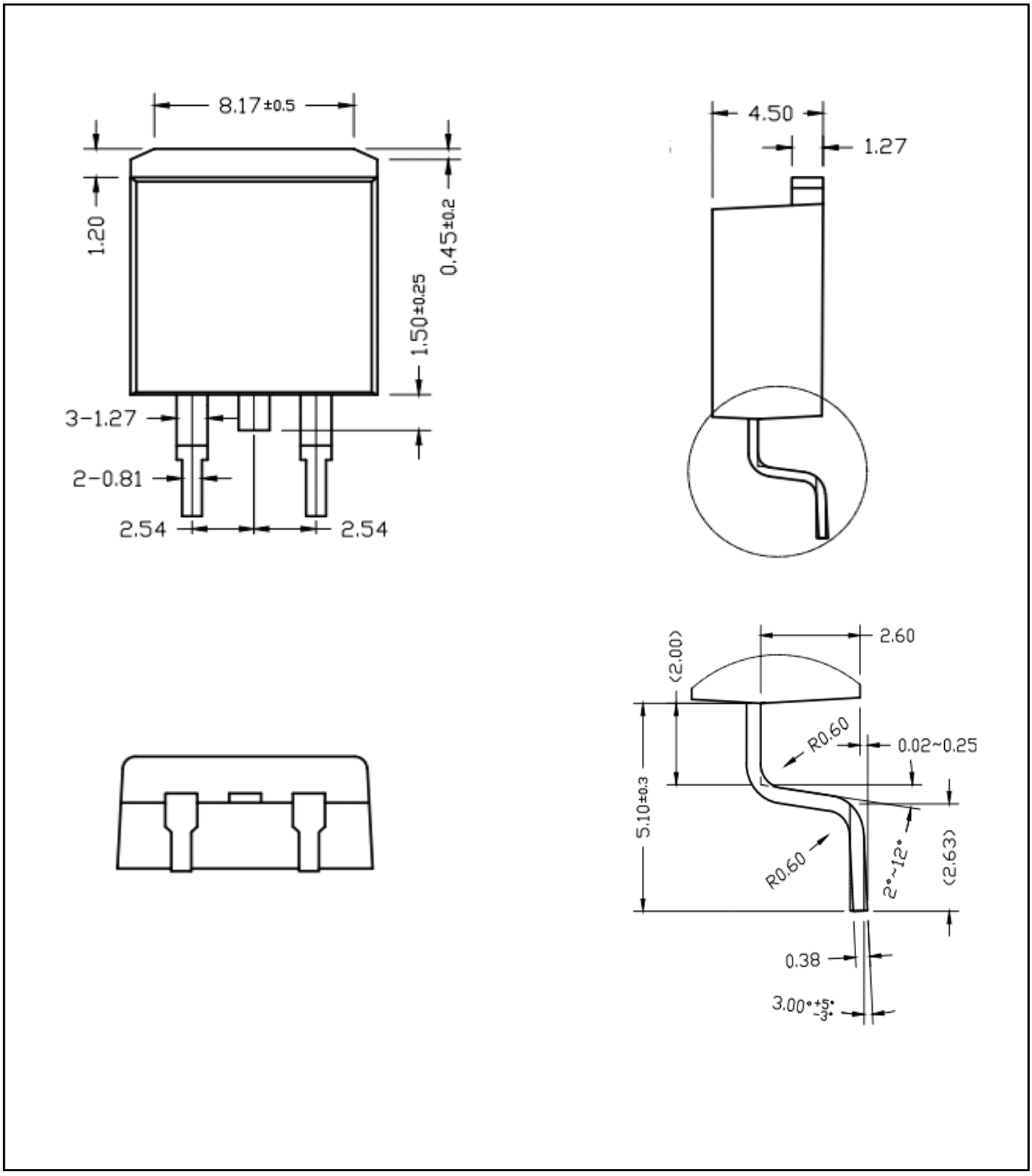


NUMBER OF CYCLES AT 60HZ
Fig.4 Max Non-Repetitive Surge Current

■ TO-220F-3L PACKAGE OUTLINE DIMENSIONS



■ TO-220-3L PACKAGE OUTLINE DIMENSIONS



■ TO-263-2L PACKAGE OUTLINE DIMENSIONS