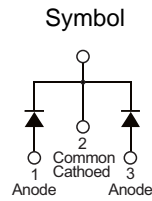


### PRODUCT CHARACTERISTICS

VR(@IC=0.5mA)	45V
VF(Typ@IF=20A)	0.58V
IR(@VR=45V)	50uA
ID	40A

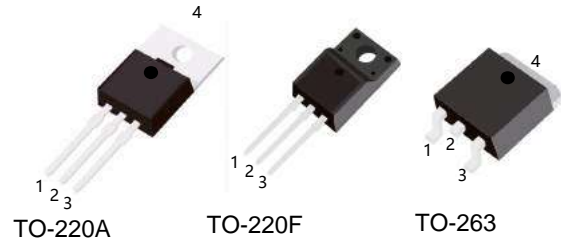


### MECHANICAL CHARACTERISTICS

- \* Case: epoxy,molded
- \* Finish:all external surfaces corrosion resistant and terminal
- \* Leads are readily solderable
- \* Leads 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 package are available



### ORDER INFORMATION

Order codes		Package	Packing
Halogen-free	Halogen		
N/A	MBR4045A	TO-220	50pieces/Tube
N/A	MBR4045F	TO-220F	50pieces/Tube
N/A	MBR4045E	TO-263	800pieces/Reel

### MAXIMUM RATINGS (Each diode leg)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	$V_{RRM}$	45	V
Average rectified output current	Total	40	A
	Per leg	20	A
Non-repetitive peak forward surge current 8.3ms single half sine-wave superimposed on reate load	$I_{FSM}$	400	A
Operating and storage temperature range	$T_J, T_{STG}$	-55 to + 175	°C

### ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Peak repetitive reverse voltage	$B_V$	$I_C=0.5mA, T_J=25^\circ C$	45	-	-	V
Forward voltage drop	$V_F$	$I_F=20A, T_J=25^\circ C$	-	0.58	0.62	V
Leakage current	$I_R$	$V_R=45V, T_J=25^\circ C$	-	-	0.05	mA
		$V_R=45V, T_J=125^\circ C$	-	-	6	

### ■ TYPICAL CHARACTERISTICS

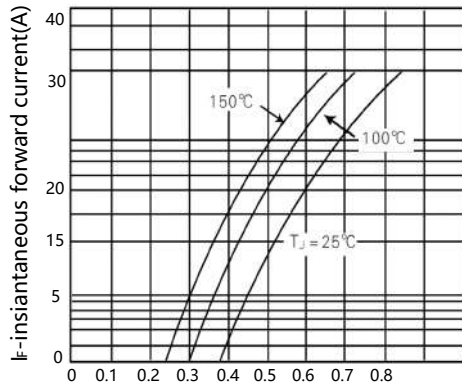


Figure 1 typical forward voltage per diode

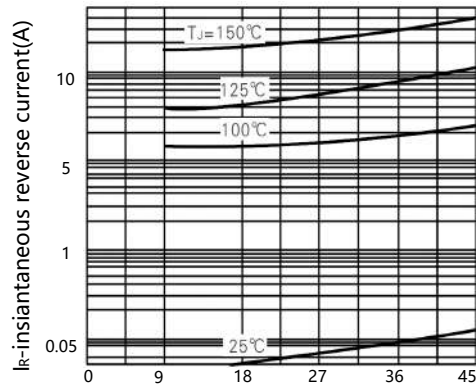


Figure 2 typical reverse current per diode

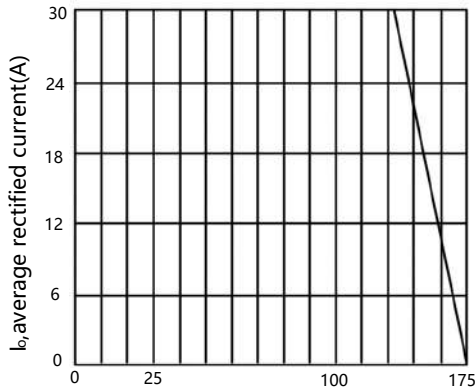


Figure 3 forward current derating curve

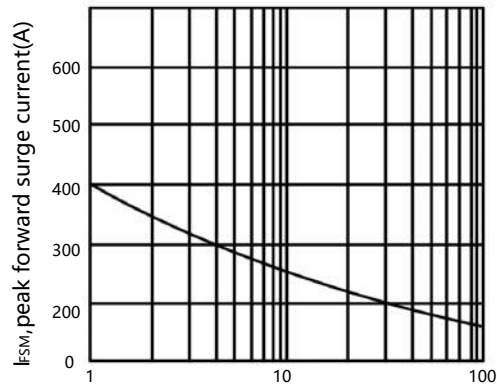
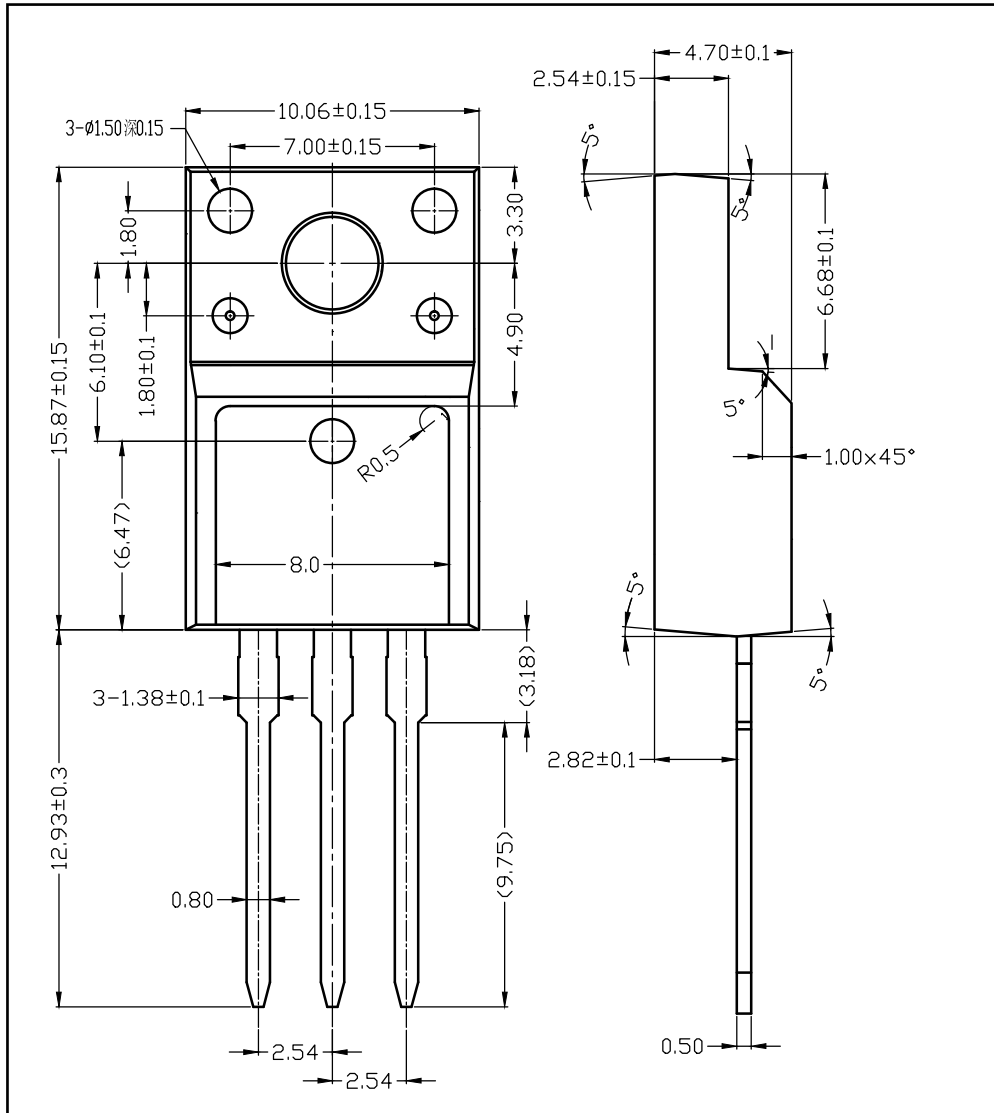
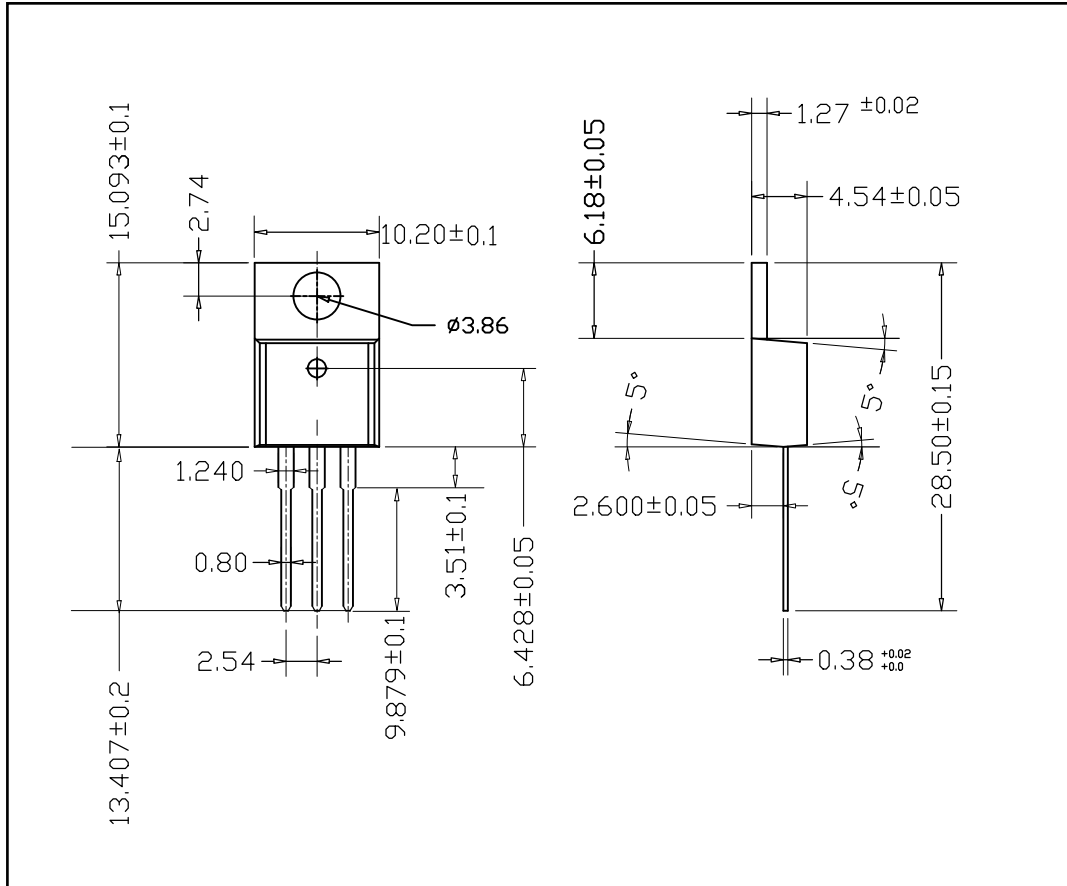


Figure 4 max non-repetitive surge current

■ TO-220F PACKAGE OUTLINE DIMENSIONS



■ TO-220 PACKAGE OUTLINE DIMENSIONS



■ TO-263 PACKAGE OUTLINE DIMENSIONS

