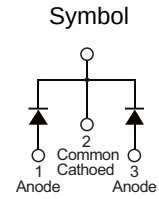


PRODUCT CHARACTERISTICS

VR(@IC=0.5mA)	45V
VF(Typ@IF=15A)	0.53V
IR(@VR=45V)	50uA
ID	30A

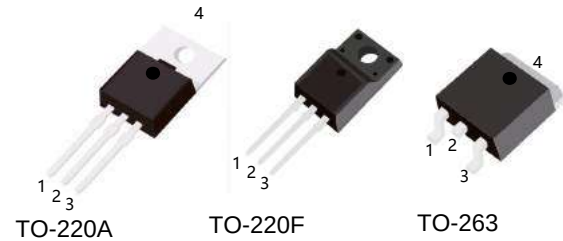


MECHANICAL CHARACTERISTICS

- * 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	MBR3045A	TO-220	50pieces/Tube
N/A	MBR3045F	TO-220F	50pieces/Tube
N/A	MBR3045E	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	30	A
	Per leg	15	A
Non-repetitive peak forward surge current 8.3ms single half sine-wave superimposed on reate load	I_{FSM}	300	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	$I_F=15AT_J=25^{\circ}C$	-	0.53	0.58	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

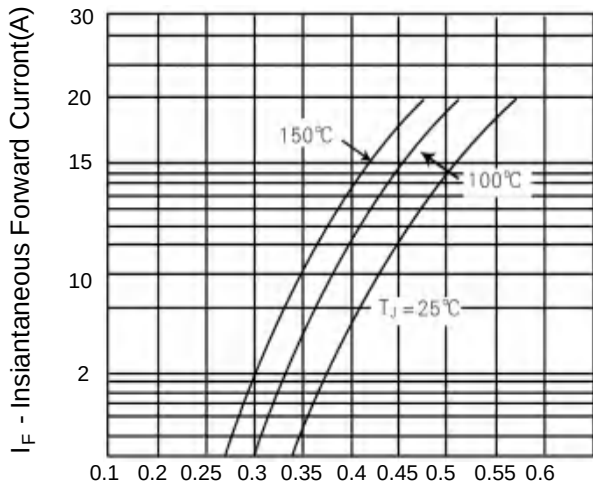


Figure 1. Typical Forward Voltage Per Diode

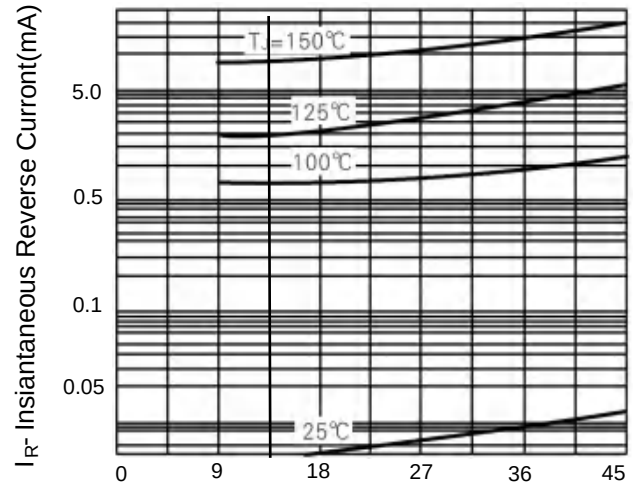


Figure 2. Typical Reverse Current Per Diode

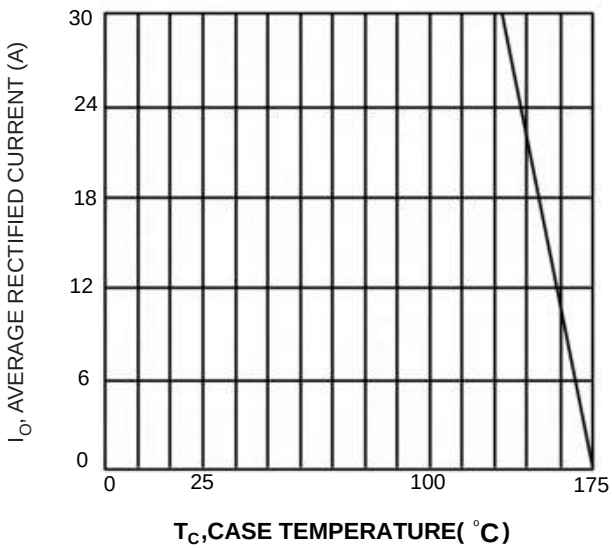


Fig.3 Forward Current Derating Curve

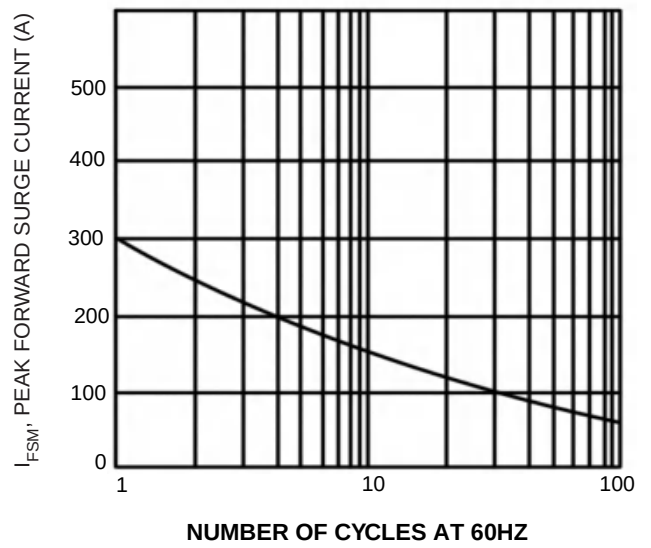


Fig.4 Max Non-Repetitive Surge Current

Technical drawing of a mechanical part, showing three views: front view, top view, and side view. The drawing includes dimensions and tolerances for various features.

Front View Dimensions:

- Overall width: 10.06 ± 0.15
- Overall height: 15.87 ± 0.15
- Top section height: 3.30
- Bottom section height: 4.90
- Central circular feature diameter: 8.0
- Three smaller circular features (top): $3 \times \phi 1.50 \pm 0.15$
- Three smaller circular features (bottom): $3 \times 1.38 \pm 0.1$
- Top section width: 7.00 ± 0.15
- Bottom section width: 8.0
- Top section width (inner): 6.10 ± 0.1
- Bottom section width (inner): 6.47
- Top section width (outer): 2.54 ± 0.15
- Bottom section width (outer): 2.54
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80 ± 0.1
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80

Top View Dimensions:

- Overall width: 10.06 ± 0.15
- Overall height: 15.87 ± 0.15
- Central circular feature diameter: 8.0
- Three smaller circular features (top): $3 \times \phi 1.50 \pm 0.15$
- Three smaller circular features (bottom): $3 \times 1.38 \pm 0.1$
- Top section width: 7.00 ± 0.15
- Bottom section width: 8.0
- Top section width (inner): 6.10 ± 0.1
- Bottom section width (inner): 6.47
- Top section width (outer): 2.54 ± 0.15
- Bottom section width (outer): 2.54
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80 ± 0.1
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80

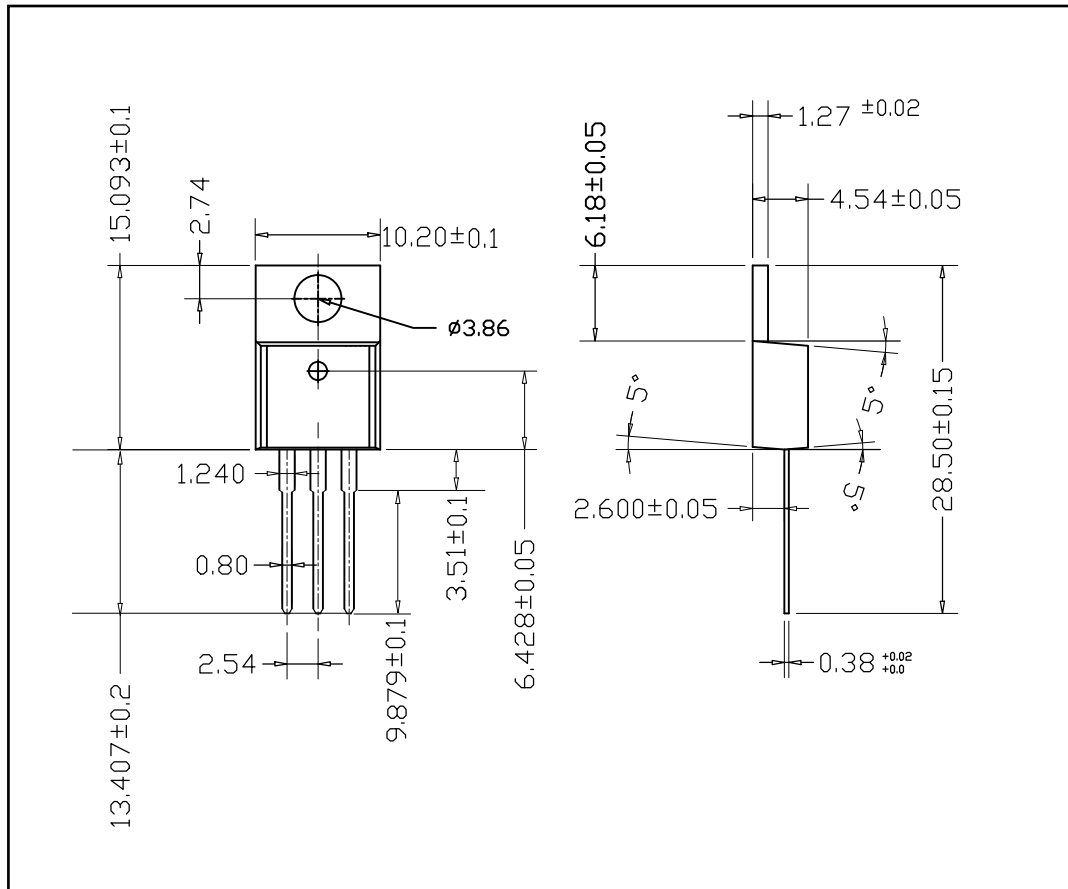
Side View Dimensions:

- Overall width: 4.70 ± 0.1
- Overall height: 15.87 ± 0.15
- Central circular feature diameter: 8.0
- Three smaller circular features (top): $3 \times \phi 1.50 \pm 0.15$
- Three smaller circular features (bottom): $3 \times 1.38 \pm 0.1$
- Top section width: 7.00 ± 0.15
- Bottom section width: 8.0
- Top section width (inner): 6.10 ± 0.1
- Bottom section width (inner): 6.47
- Top section width (outer): 2.54 ± 0.15
- Bottom section width (outer): 2.54
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80 ± 0.1
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80

Other Dimensions:

- Top section width: 7.00 ± 0.15
- Bottom section width: 8.0
- Top section width (inner): 6.10 ± 0.1
- Bottom section width (inner): 6.47
- Top section width (outer): 2.54 ± 0.15
- Bottom section width (outer): 2.54
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80 ± 0.1
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80
- Top section width (inner): 1.80
- Bottom section width (inner): 1.80
- Top section width (outer): 1.80
- Bottom section width (outer): 1.80

■ TO-220 PACKAGE OUTLINE DIMENSIONS



[illegible]