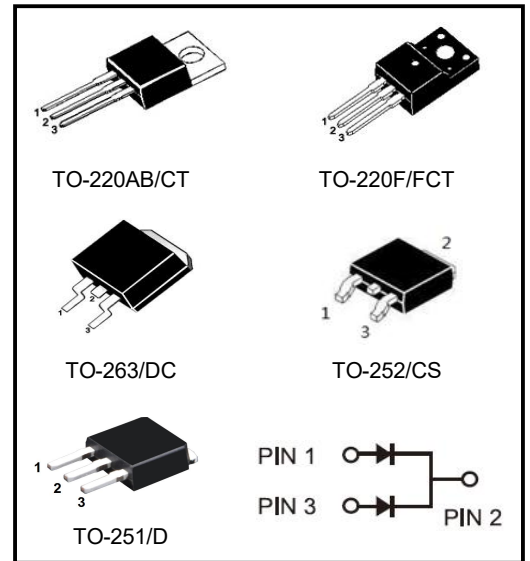


**SCHOTTKY BARRIER RECTIFIER**
**Reverse Voltage - 45 V**
**Forward Current - 30 A**
**FEATURES**

- ◆ Low forward voltage
- ◆ High current capability
- ◆ High forward surge capability
- ◆ Low power losses, High efficiency
- ◆ Guarding for over voltage protection

**MECHANICAL DATA**

- ◆ Case: Molded plastic
- ◆ Polarity: As marked
- ◆ Mounting Position: Any
- ◆ Molded Plastic: UL Flammability Classification Rating 94V-0
- ◆ Lead free in compliance with EU RoHS 2011/65/EU directive
- ◆ Solder bath temperature 275°C maximum, 10s per JESD22-106


**Primary Characteristic**

<b>I<sub>o</sub></b>	<b>2*15A</b>
<b>V<sub>RRM</sub></b>	<b>45V</b>
<b>I<sub>FSM</sub></b>	<b>300A</b>
<b>V<sub>F</sub></b>	<b>0.58V</b>
<b>T<sub>J</sub> Max</b>	<b>150°C</b>

**Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified**

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	<b>V<sub>RRM</sub></b>	45	<b>V</b>
Maximum RMS voltage	<b>V<sub>RMS</sub></b>	31.5	<b>V</b>
Maximum DC Blocking Voltage	<b>V<sub>DC</sub></b>	45	<b>V</b>
Maximum Average Forward Rectified Current	Per Leg	15	<b>A</b>
	Total	30	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	<b>I<sub>FSM</sub></b>	300	<b>A</b>
Operating Temperature Range	<b>T<sub>J</sub></b>	150	<b>°C</b>
Storage Temperature Range	<b>T<sub>STG</sub></b>	-40~ +150	<b>°C</b>
Typical Thermal Resistance <small>(Note1)</small> TO-220AB,TO-263, TO-252,TO-251 TO-220F	<b>R<sub>θJA</sub>/ R<sub>θJC</sub></b>	2/4	<b>°C/W</b>

**Note1: Thermal resistance from Junction to case per leg mounted on heatsink.**
**Electrical Characteristics (Per Leg) unless otherwise specified**

Characteristics	Symbol	Value		Unit	
Forward Voltage Drop(Note2)	<b>V<sub>F</sub></b>	Typ.	Max.	<b>V</b>	
at I <sub>F</sub> =5A		TA=25°C	0.48		-
		TA=125°C	0.40		-
at I <sub>F</sub> =10A		TA=25°C	0.56		0.61
		TA=125°C	0.51		-
at I <sub>F</sub> =15A		TA=25°C	0.63		0.70
		TA=125°C	0.58		-
Maximum Reverse Current at V <sub>R</sub> =45V		<b>I<sub>R</sub></b>	TA=25°C		13
	TA=125°C		3	<b>mA</b>	

**Note2: Pulse test: 300 μs pulse width, 1 % duty cycle**

**RATINGS AND CHARACTERISTIC CURVES**

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

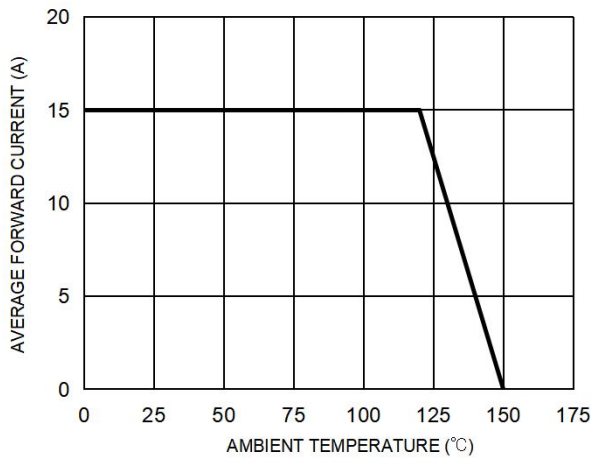


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

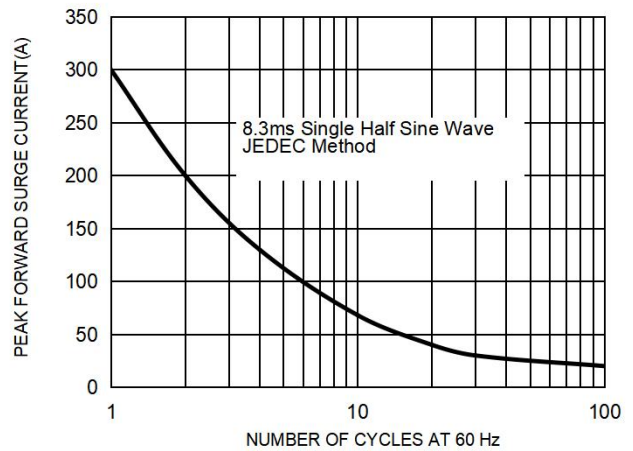


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

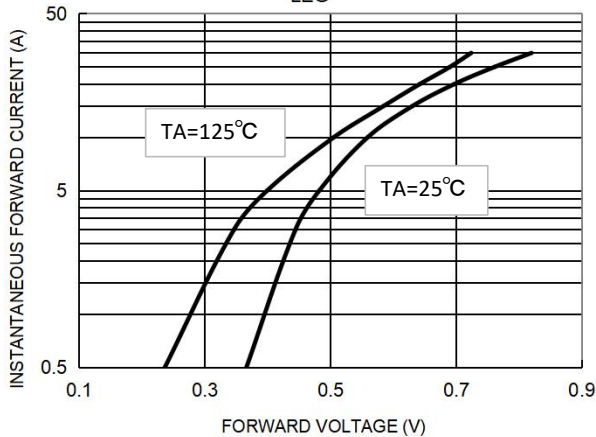
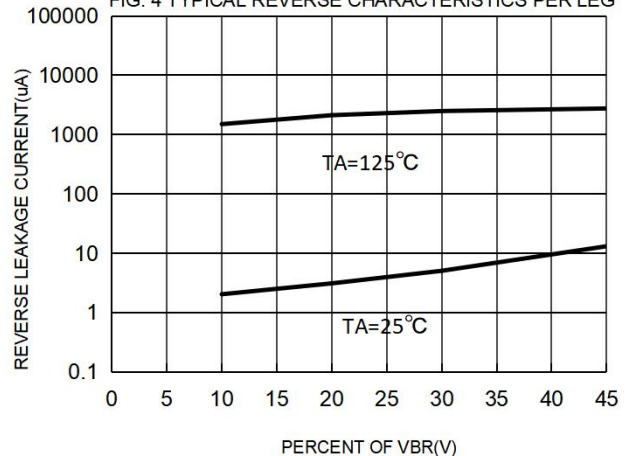
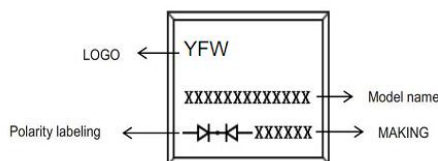


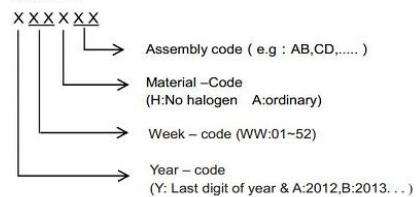
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



**MAKING:**



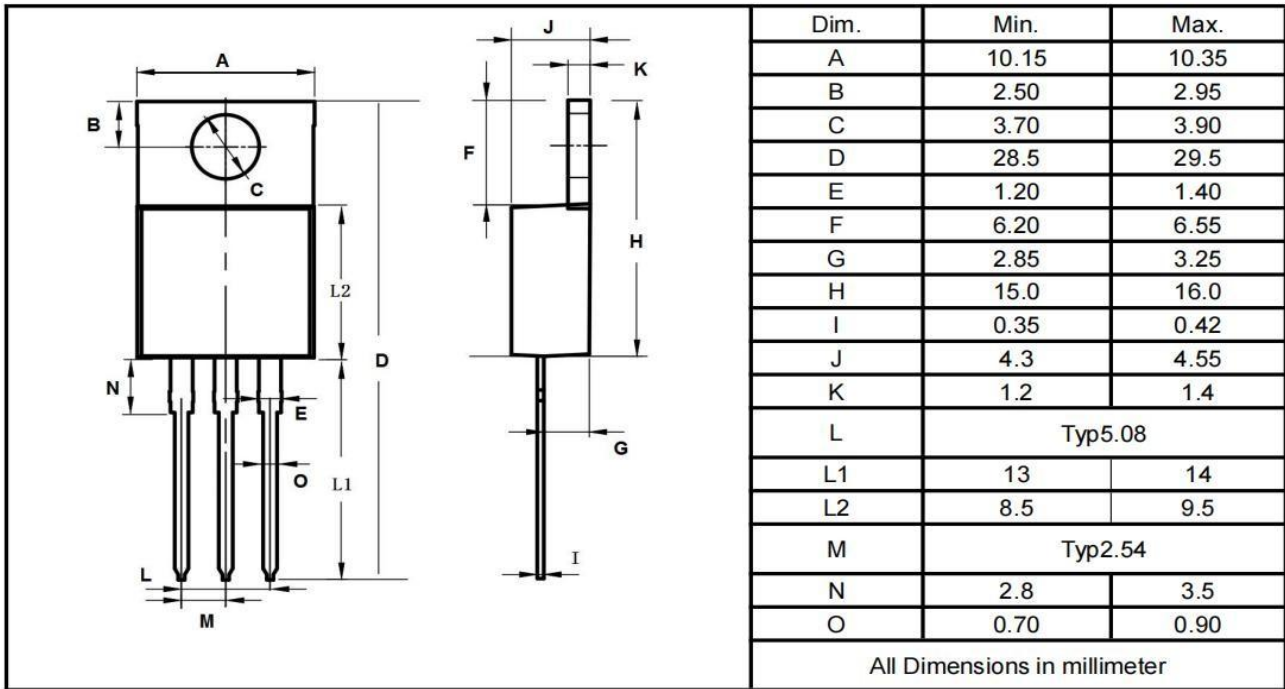
**Ordering information**

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
MBR3045CT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MBR3045FCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MBR3045DC-G	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MBR3045DC	TO-263	0.04oz(1.16g)	800 pcs / reel	1600pcs/box 8000pcs/carton
MBR3045CS	TO-252	0.011oz(0.32g)	2500 pcs / reel	5000pcs/box 25000pcs/carton
MBR3045D	TO-251	0.011oz(0.32g)	80 pcs / tube	4000pcs/box 24000pcs/carton

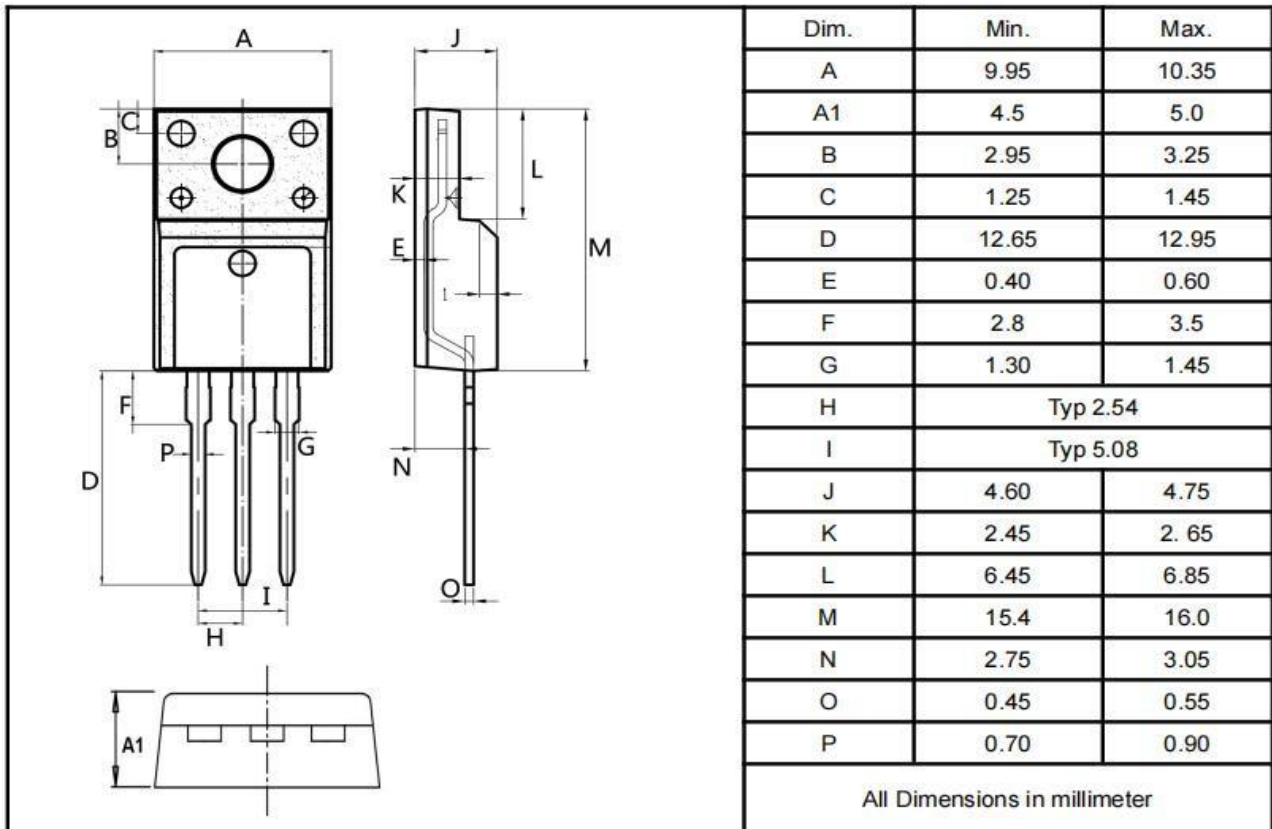
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

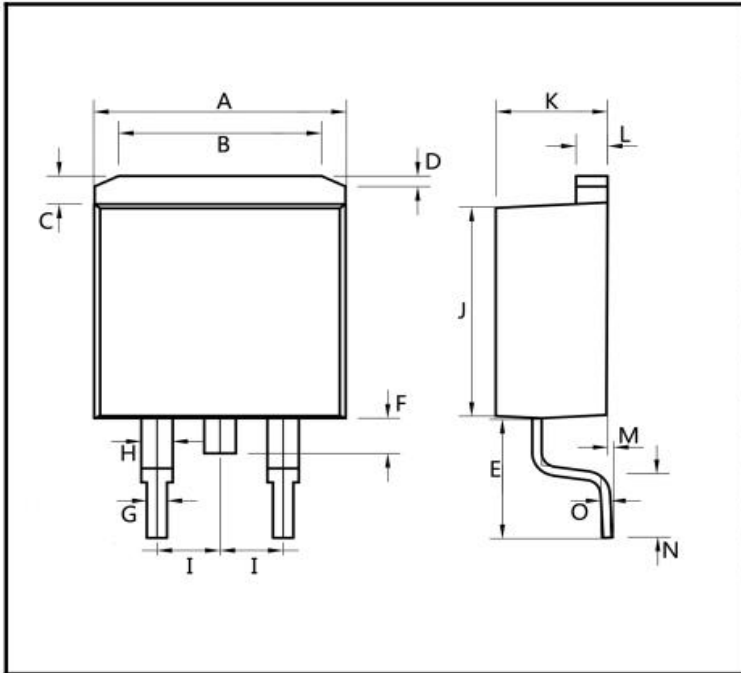
TO-220AB



TO-220F

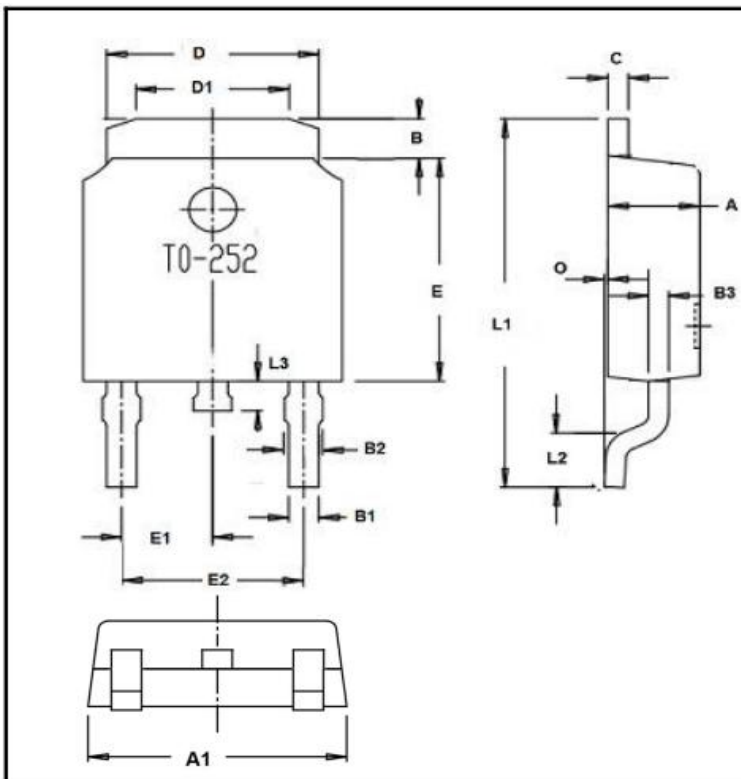


**TO-263**



Dim.	Min.	Max.
A	10.10	10.35
B	6	8
C	1.2	1.5
D	0.55	1.0
E	4.3	5.3
F	1.4	1.6
G	0.75	0.85
H	1.2	1.5
I	Typ2.54	
J	8.5	9.5
K	4.3	4.55
L	1.25	1.35
M	0.02	0.23
N	2.2	2.8
O	0.3	0.4
All Dimensions in millimeter		

**TO-252**



Dim.	Min.	Max.
A	2.1	2.5
A1	6.3	6.9
B	0.95	1.55
B1	0.6	0.8
B2	0.75	0.95
C	Typ0.5	
D	5.3	5.5
D1	3.65	4.05
E	5.8	6.4
E1	Typ2.3	
E2	Typ4.6	
O	0	0.15
L1	9	11
L2	Typ1.5	
L3	0.7	1.0
All Dimensions in millimeter		

**TO-251**

