

**ULTRAFAST RECOVERY RECTIFIERS**
**Reverse Voltage - 1200 V**
**Forward Current - 20 A**
**FEATURES**

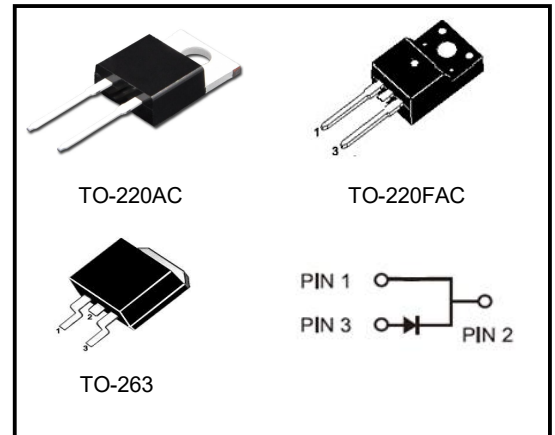
- ◆High speed switching capability
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses, High efficiency
- ◆For use in low voltage, high frequency inverters

**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 JESD 22-B106

**Primary Characteristic**

<b>I<sub>o</sub></b>	<b>20A</b>
<b>V<sub>RRM</sub></b>	<b>1200V</b>
<b>I<sub>FSM</sub></b>	<b>230A</b>
<b>V<sub>F</sub></b>	<b>1.73V</b>
<b>T<sub>rr</sub></b>	<b>48ns</b>
<b>T<sub>J</sub> Max</b>	<b>150°C</b>


**Maximum Ratings at Ta=25°C unless otherwise specified**

Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	1200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	840	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	1200	V
Maximum Average Forward Rectified Current	I <sub>o</sub>	20	A
Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	230	A
Operating Temperature Range	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-40 to +150	°C
Typical Thermal Resistance (Note1) TO-220AC,TO-263	R <sub>θJC</sub>	2	°C/W
TO-220FAC		4	

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

Characteristics		Symbol	Value		Unit
Forward Voltage Drop(Note2)		V <sub>F</sub>	Typ.	Max.	V
at I <sub>F</sub> =5A	TA=25°C		1.38	-	
	TA=125°C		1.12	-	
at I <sub>F</sub> =15A	TA=25°C		1.79	-	
	TA=125°C		1.57	-	
at I <sub>F</sub> =20A	TA=25°C		1.93	2.2	
	TA=125°C	1.73	-		
Maximum Reverse Current at V <sub>R</sub> =1200V	TA=25°C	I <sub>R</sub>	0.2	10	μA
	TA=125°C		5	-	μA
Maximum Reverse Recovery Time at I <sub>F</sub> =0.5A, I <sub>R</sub> =1A,		T <sub>rr</sub>	48	75	ns

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

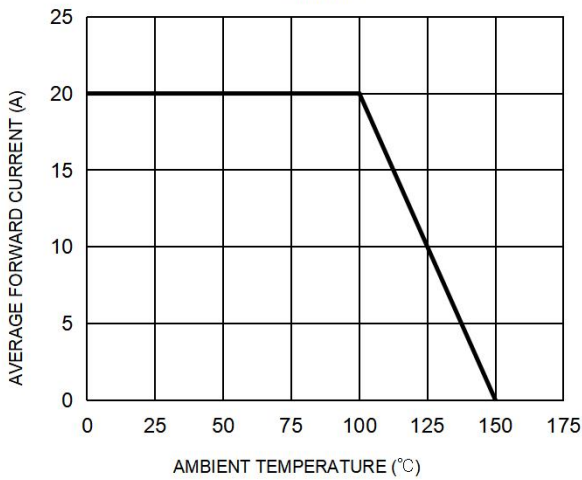


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

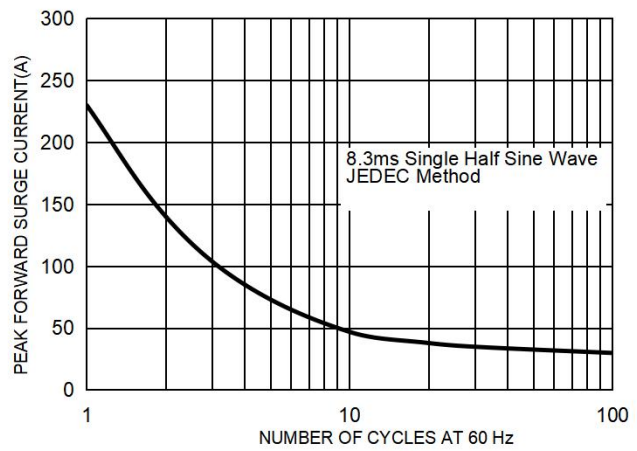


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

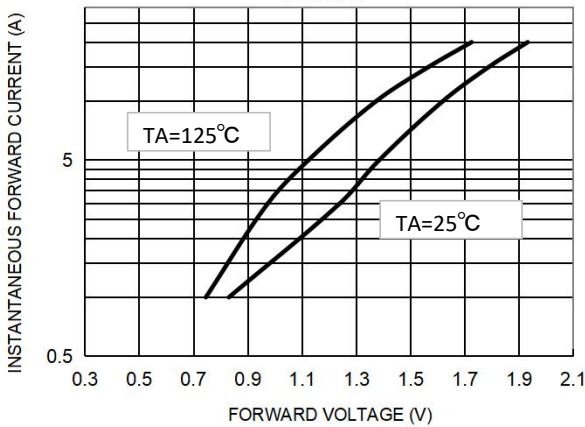
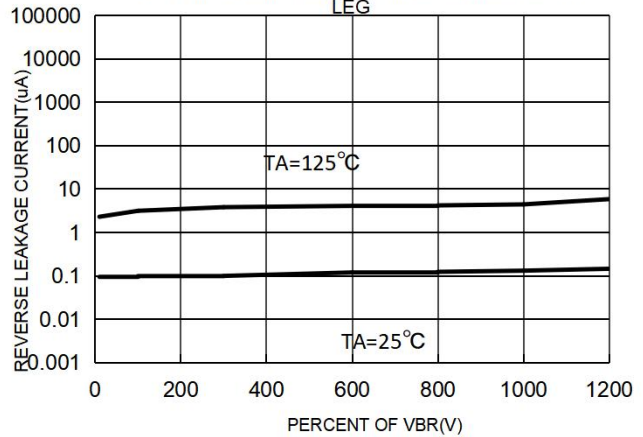
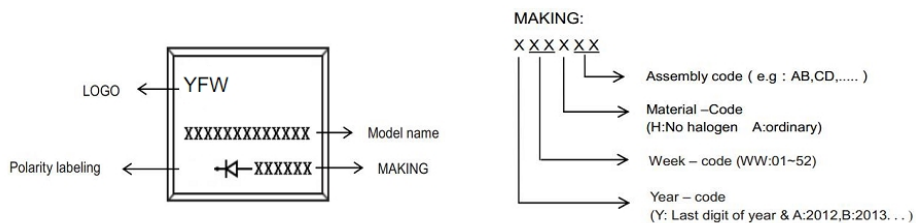


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



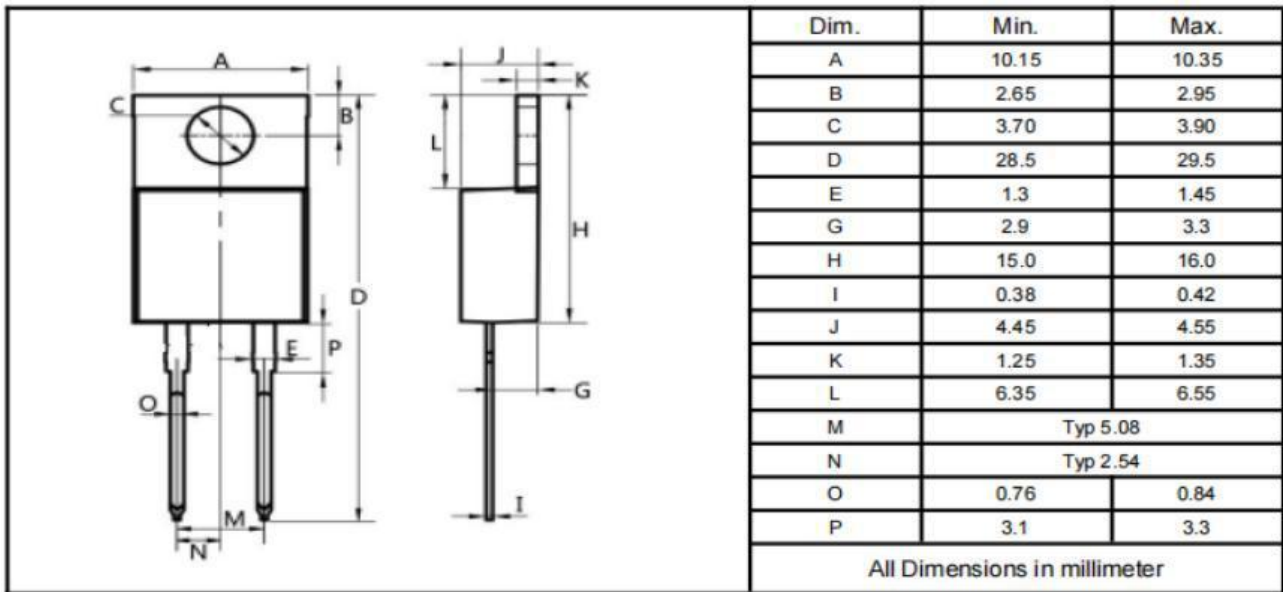
**Ordering information**

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
MUR20120AC	TO-220AC	0.067oz(1.9g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR20120FAC	TO-220FAC	0.06oz(1.7g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR20120DC-G	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR20120DC	TO-263	0.04oz(1.16g)	800 pcs / reel	1600pcs/box 8000pcs/carton

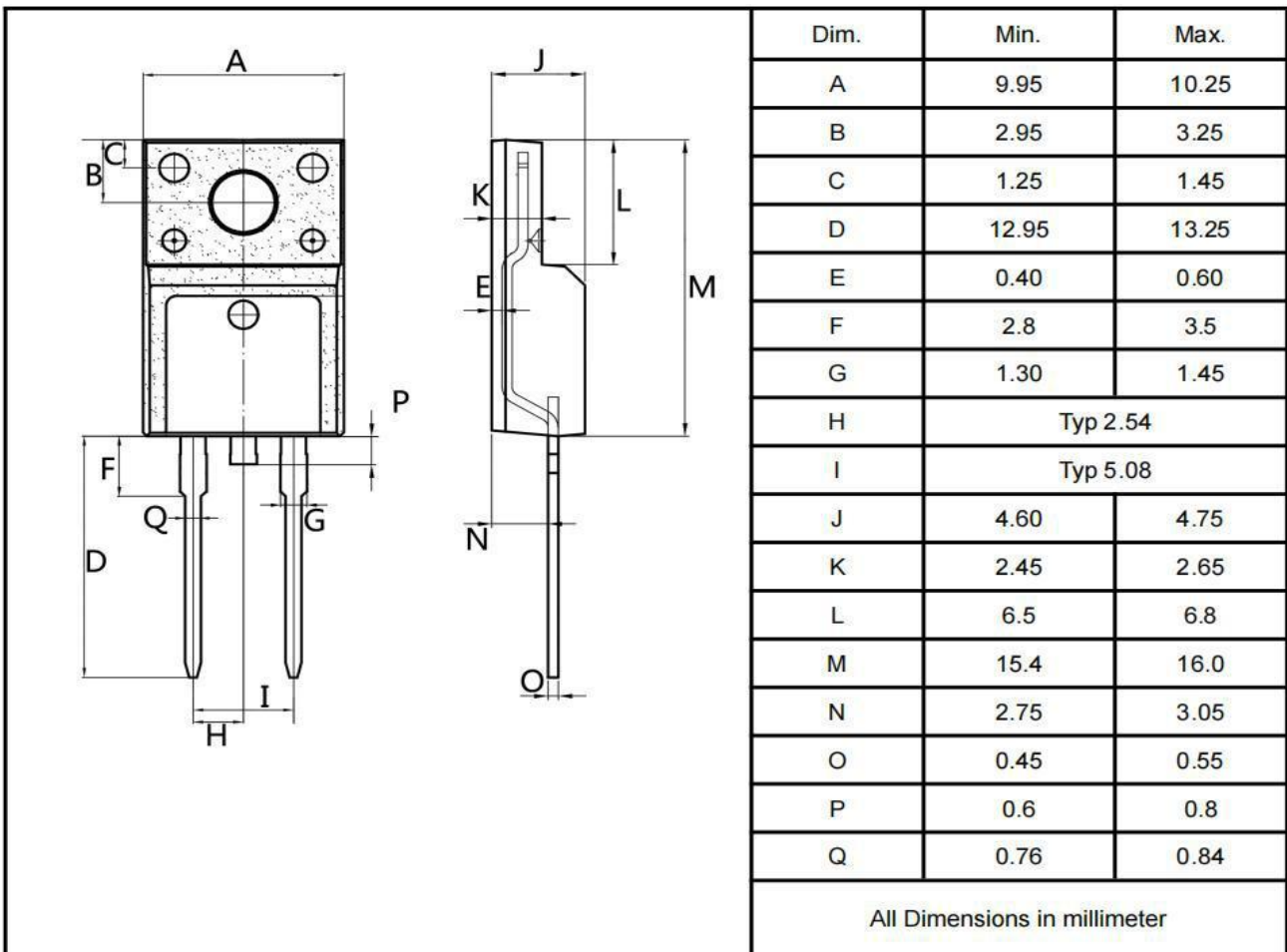
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

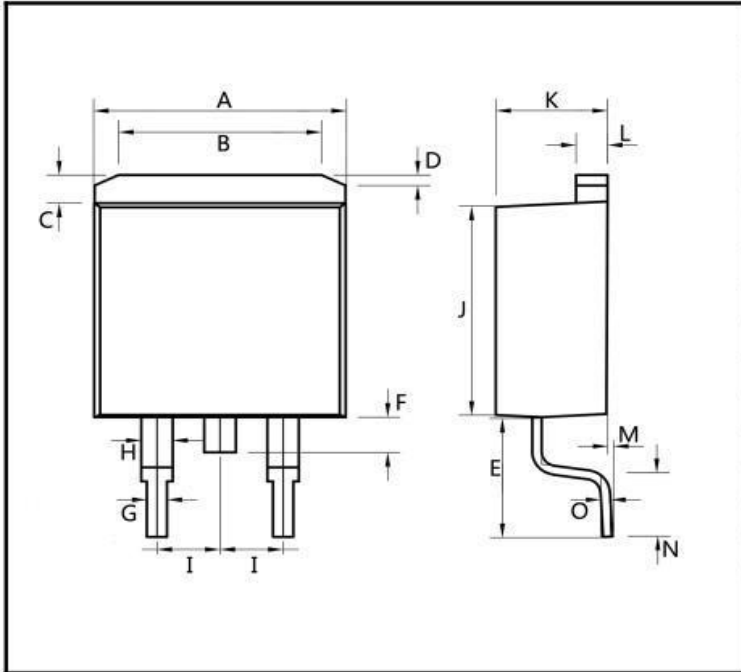
**TO-220AC**



**TO-220FAC**



**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		

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