

## ULTRAFST RECOVERY RECTIFIERS

**Reverse Voltage - 400 V**

**Forward Current - 10 A**

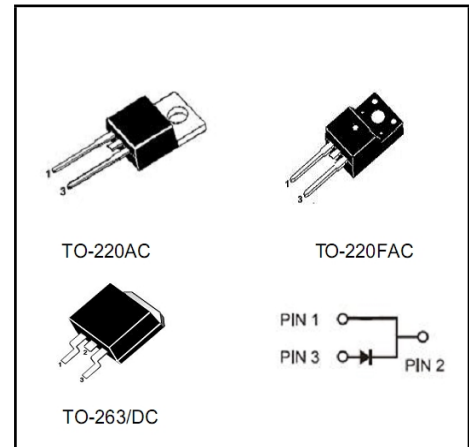


### FEATURES

- ◆ High speed switching capability
- ◆ High current capability
- ◆ High forward surge capability
- ◆ Low power losses · High efficiency
- ◆ For use in low voltage, high frequency inverters
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- ◆ Case: TO-220AC TO-220FAC TO-263/DC
- ◆ Solder bath temperature 275°C maximum, 10s per JESD22-106



### Primary Characteristic

<b>I<sub>o</sub></b>	<b>10A</b>
<b>V<sub>RRM</sub></b>	<b>400V</b>
<b>I<sub>FSM</sub></b>	<b>160A</b>
<b>V<sub>F</sub></b>	<b>0.95V</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>	400	<b>V</b>
Maximum RMS voltage	<b>V<sub>RMS</sub></b>	400	<b>V</b>
Maximum DC Blocking Voltage	<b>V<sub>DC</sub></b>	400	<b>V</b>
Maximum Average Forward Rectified Current	<b>I<sub>o</sub></b>	10	<b>A</b>
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	<b>I<sub>FSM</sub></b>	160	<b>A</b>
Operating Temperature Range	<b>T<sub>J</sub></b>	-40 ~ +150	<b>°C</b>
Storage Temperature Range	<b>T<sub>STG</sub></b>	-40 ~ +150	<b>°C</b>
Typical Thermal Resistance (Note1) TO-220AC TO-263/DC TO-220FAC	<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	Symbols	Value		Units
		Typ	Max	
Forward Voltage Drop(Note2)	<b>V<sub>F</sub></b>	0.91	-	<b>V</b>
at IF=3A				
		TA=125°C		
at IF=5A		TA=25°C		
		TA=125°C		
at IF=10A		TA=25°C	1.08	
	TA=125°C	0.95	-	
Maximum Reverse Current at V <sub>R</sub> =400V	<b>I<sub>R</sub></b>	0.007	1	<b>uA</b>
		5	-	<b>uA</b>
Maximum Reverse Recovery Time at IF=0.5A, IR=1A, IRR=0.25A	<b>T<sub>RR</sub></b>	-	35	<b>nS</b>

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

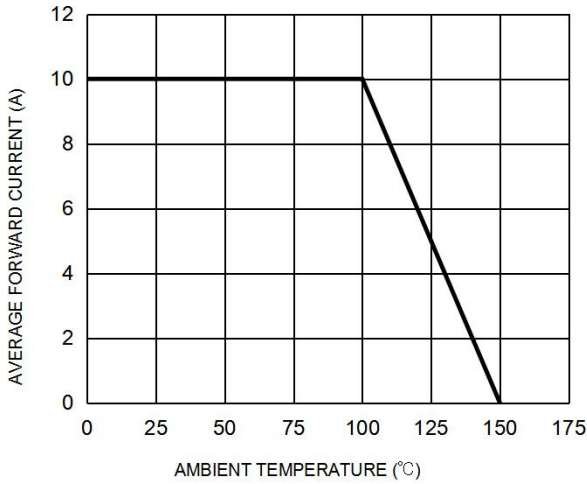


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

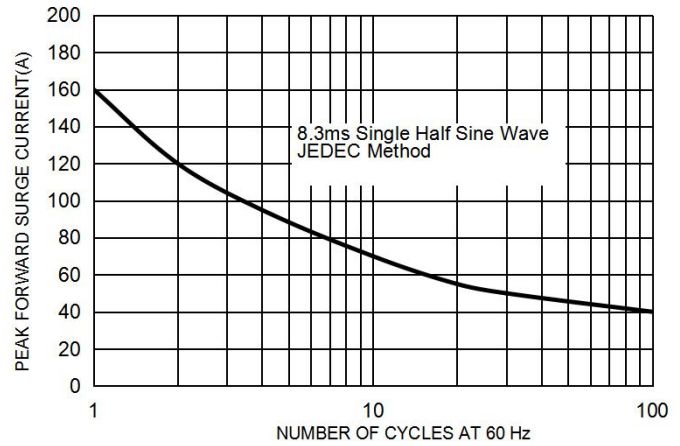


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

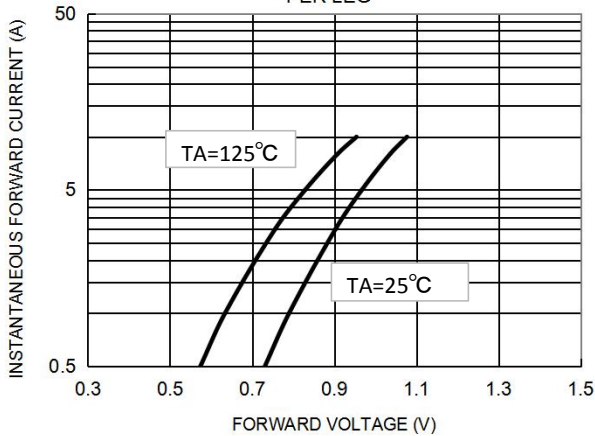
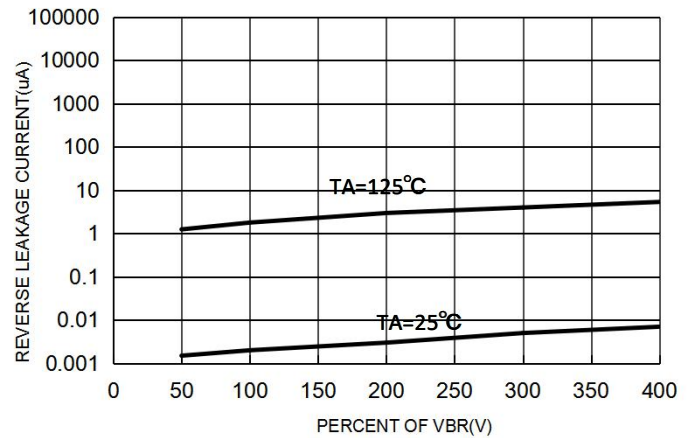
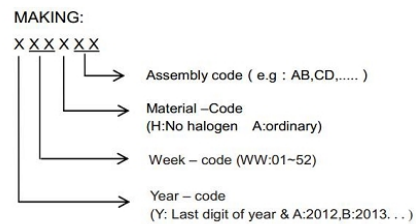
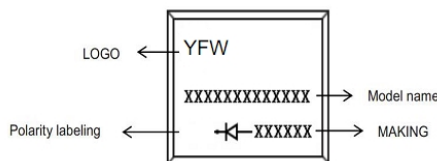


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



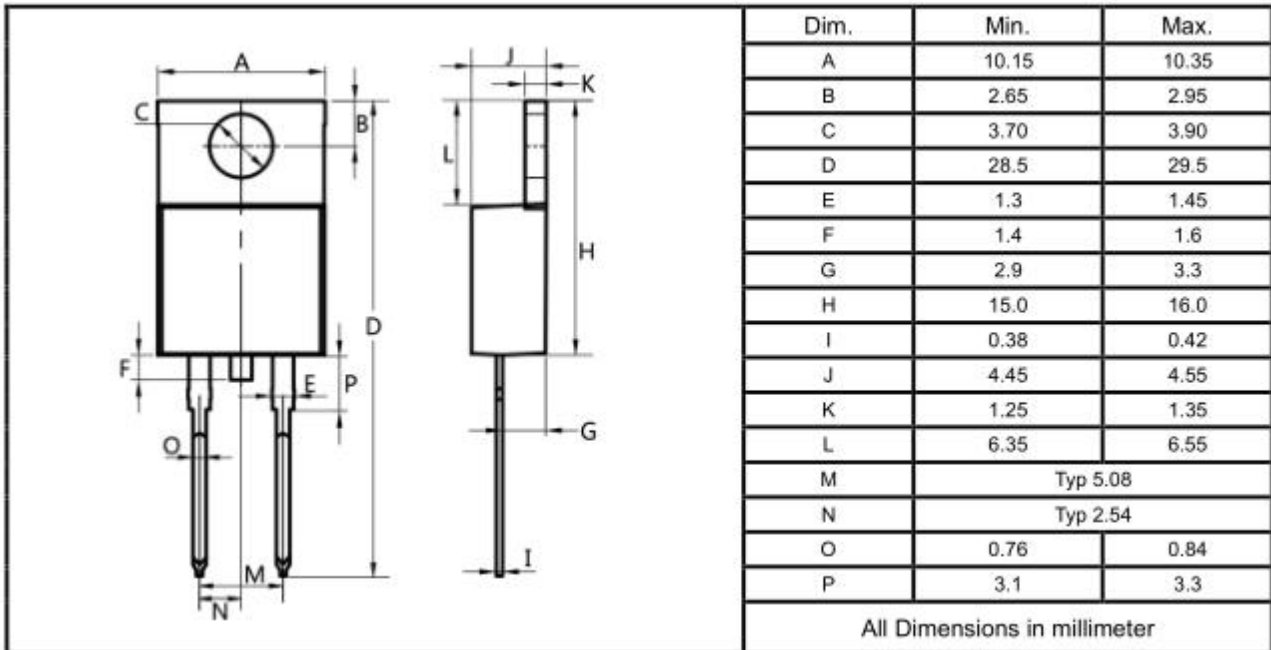
**Ordering information**

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
MUR1040	TO-220AC	0.067oz(1.9g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR1040F	TO-220FAC	0.06oz(1.7g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR1040DC	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
MUR1040DC-R	TO-263	0.04oz(1.16g)	800 pcs / reel	800pcs/box 4000pcs/carton

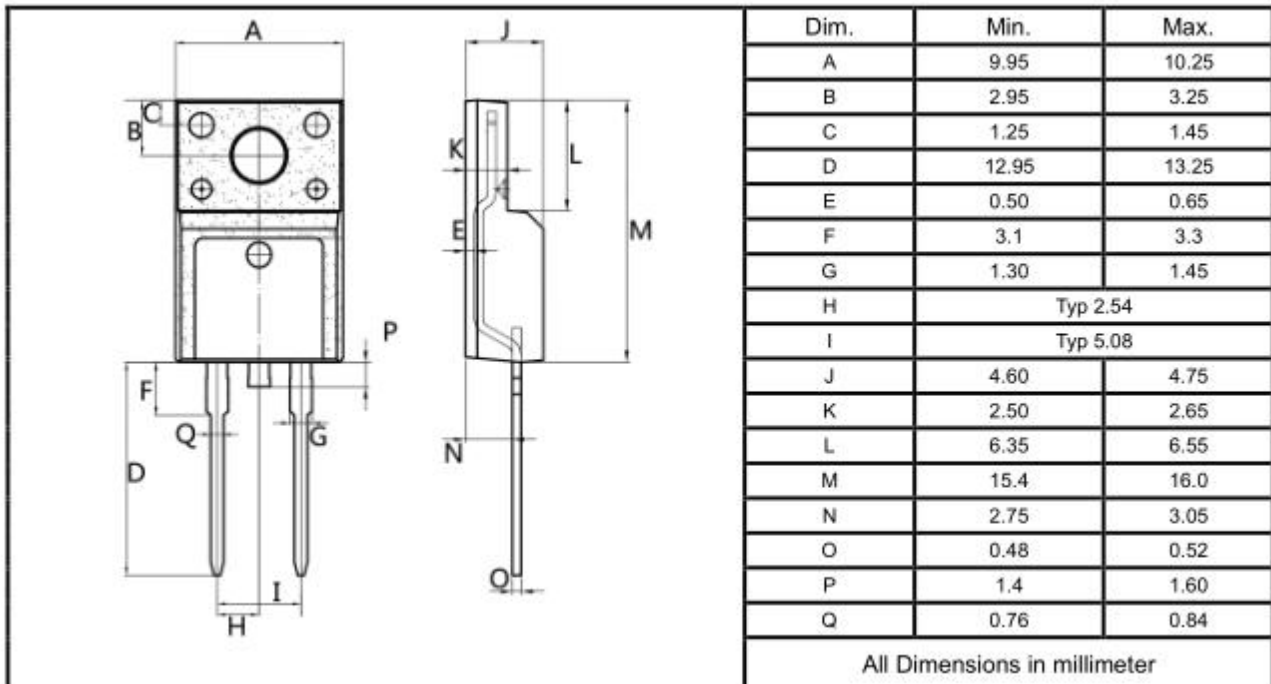
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

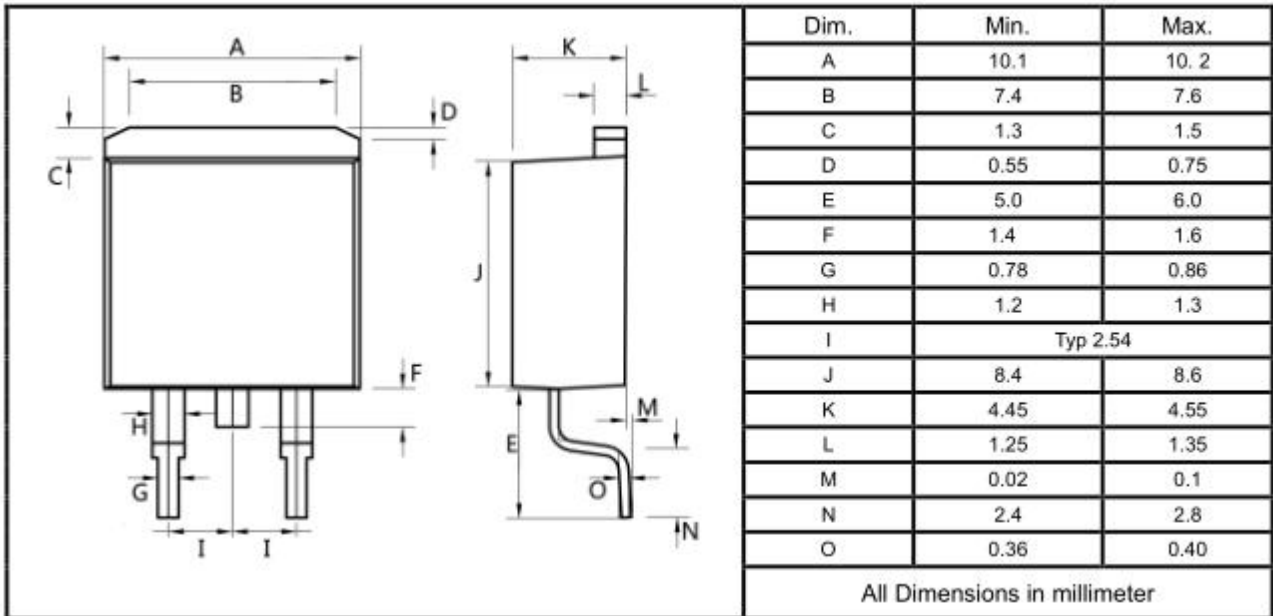
**TO-220AC**



**TO-220FAC**



TO-263



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