

**Trench MOS Barrier Schottky Rectifier**
**Reverse Voltage - 120 V**
**Forward Current - 20 A**

**FEATURES**

- ◆Very low forward voltage
- ◆High current capability
- ◆High forward surge capability
- ◆Low power losses · High efficiency
- ◆Guarding for over voltage protection
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆Case: TO-220AB/CT TO-220F/FCT TO-263/DC
- ◆Solder bath temperature 275°C maximum, 10s per JESD22-106


**Primary Characteristic**

<b>I<sub>o</sub></b>	<b>2*10A</b>
<b>V<sub>RRM</sub></b>	<b>120V</b>
<b>I<sub>FSM</sub></b>	<b>220A</b>
<b>V<sub>F</sub></b>	<b>0.61V</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>	120	<b>V</b>
Maximum RMS voltage	<b>V<sub>RMS</sub></b>	120	<b>V</b>
Maximum DC Blocking Voltage	<b>V<sub>DC</sub></b>	120	<b>V</b>
Maximum Average Forward Rectified Current	Per Leg	10	<b>A</b>
	Total	20	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave	<b>I<sub>FSM</sub></b>	220	<b>A</b>
Operating Temperature Range	<b>T<sub>J</sub></b>	-50 ~ +150	<b>°C</b>
Storage Temperature Range	<b>T<sub>STG</sub></b>	-50 ~ +150	<b>°C</b>
Typical Thermal Resistance (Note1) TO-220AB, TO-263 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	Symbols	Value		Units	
		Typ	Max		
Forward Voltage Drop(Note2)	<b>V<sub>F</sub></b>	0.47	-	<b>V</b>	
at I <sub>F</sub> =3A					TA=25°C
		TA=125°C			
at I <sub>F</sub> =5A		TA=25°C	0.54		-
		TA=125°C	0.50		-
at I <sub>F</sub> =10A		TA=25°C	0.69		0.78
	TA=125°C	0.61	-		
Maximum Reverse Current at V <sub>R</sub> =120V	<b>I<sub>R</sub></b>	30	50	<b>uA</b>	
		10	-	<b>mA</b>	

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

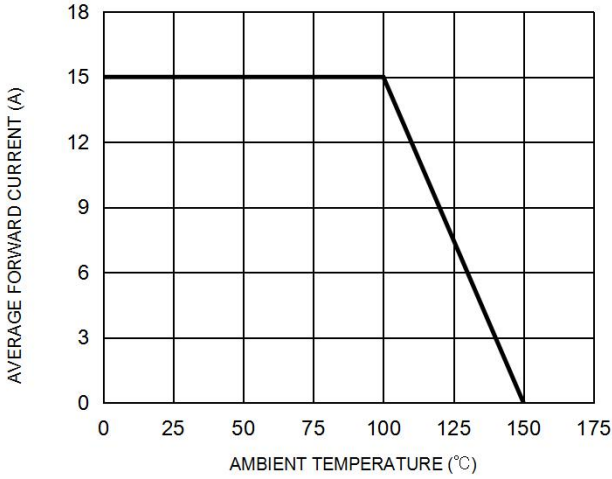


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

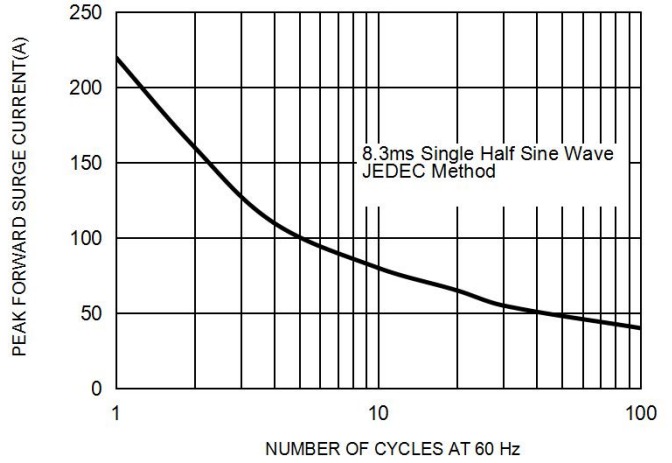


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

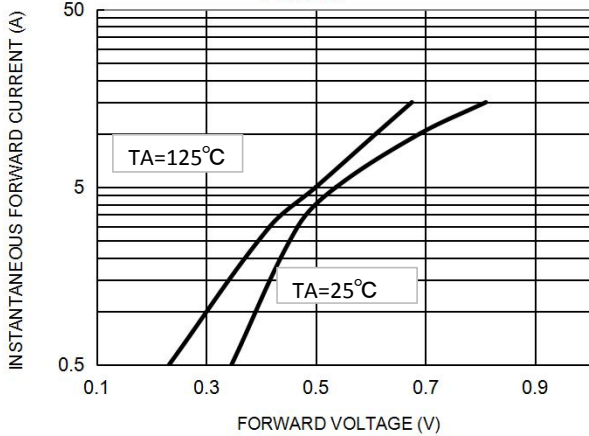
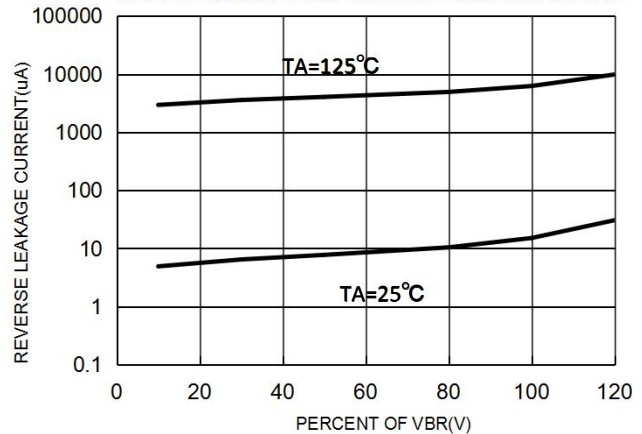
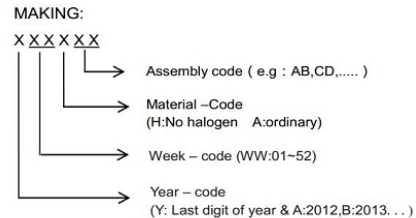
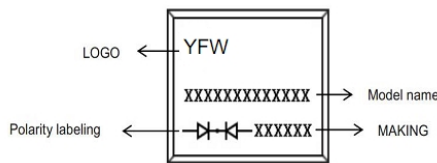


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



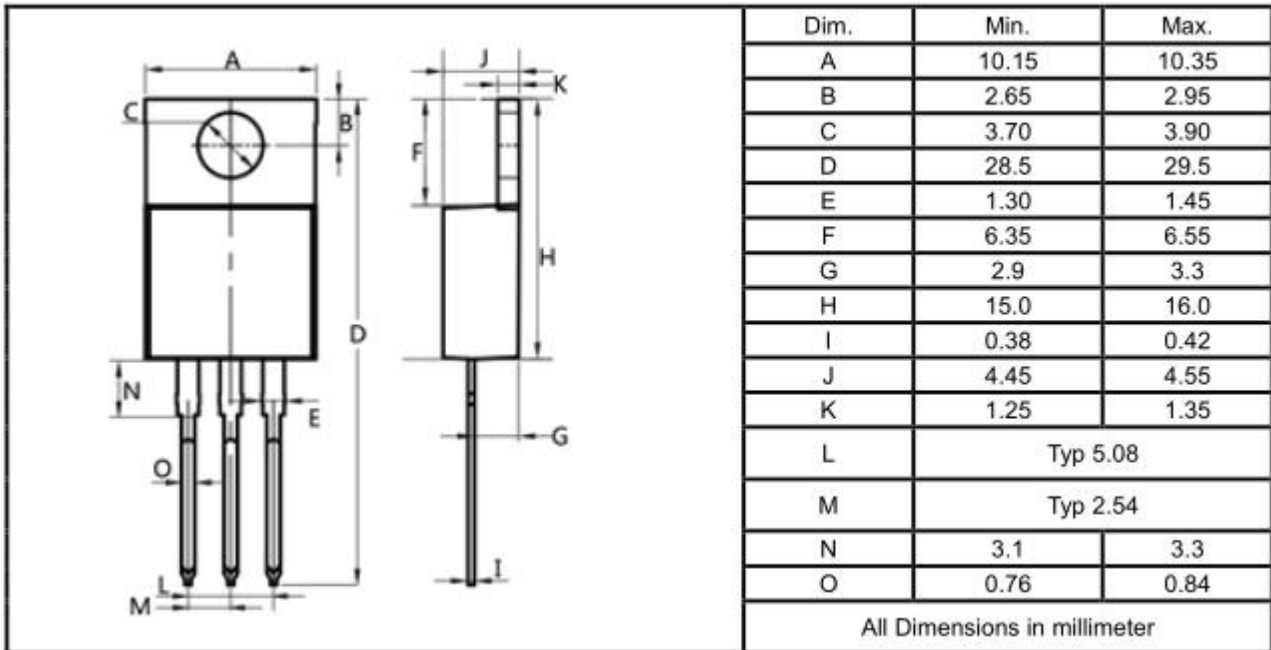
**Ordering information**

Part Number	Package	Unit Weight	Base Quantity	Delivery mode
SRT20U120CT	TO-220AB	0.07oz(1.96g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SRT20U120FCT	TO-220F	0.06oz(1.74g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SRT20U120DC	TO-263	0.04oz(1.16g)	50 pcs / tube	1000pcs/box 5000pcs/carton
SRT20U120DC-R	TO-263	0.04oz(1.16g)	800 pcs / reel	800pcs/box4000pcs/carton

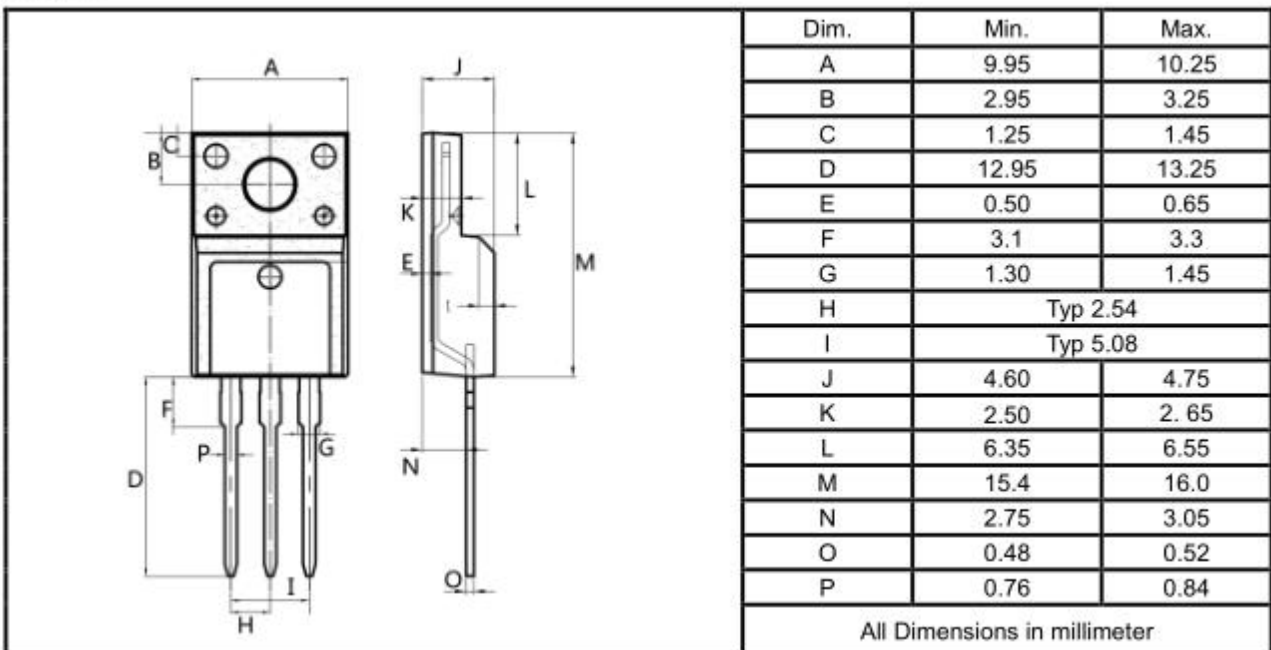
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

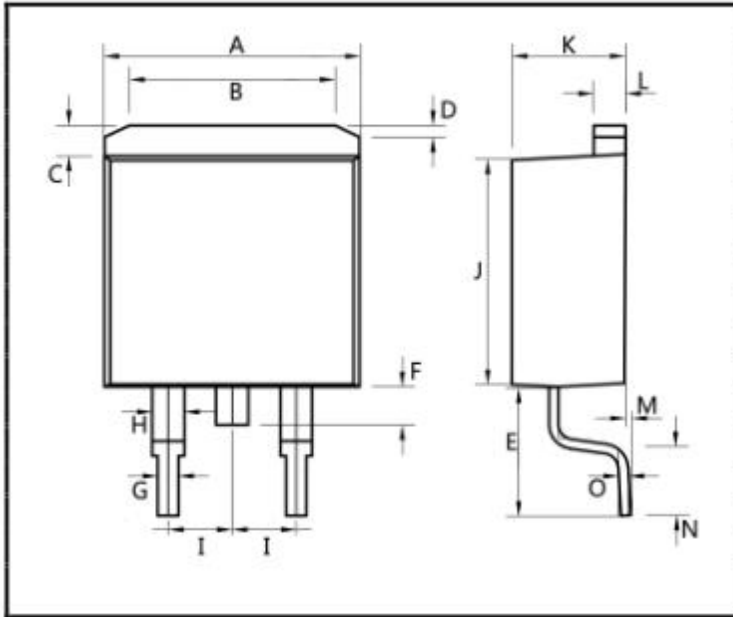
**TO-220AB**



**TO-220F**



TO-263



Dim.	Min.	Max.
A	10.1	10.2
B	7.4	7.6
C	1.3	1.5
D	0.55	0.75
E	5.0	6.0
F	1.4	1.6
G	0.78	0.86
H	1.2	1.3
I	Typ 2.54	
J	8.4	8.6
K	4.45	4.55
L	1.25	1.35
M	0.02	0.1
N	2.4	2.8
O	0.36	0.40
All Dimensions in millimeter		