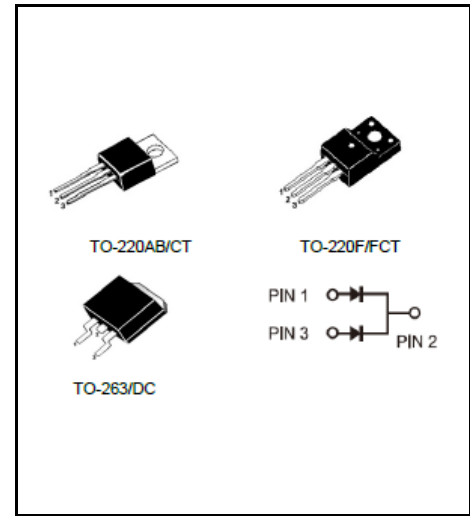


**Trench MOS Barrier Schottky Rectifier**
**Reverse Voltage - 45 V**
**Forward Current - 20 A**
**FEATURES**

- ◆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>45V</b>   |
| <b>I<sub>FSM</sub></b>   | <b>180A</b>  |
| <b>V<sub>F</sub></b>     | <b>0.43V</b> |
| <b>T<sub>J</sub> Max</b> | <b>155°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                                | 10         | <b>A</b>    |
|  | Total                                  | 20         |             |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave                | <b>I<sub>FSM</sub></b>                 | 180        | <b>A</b>    |
| Operating Temperature Range  | <b>T<sub>J</sub></b>                   | -55 ~ +150 | <b>°C</b>   |
| Storage Temperature Range  | <b>T<sub>STG</sub></b>                 | -55 ~ +150 | <b>°C</b>   |
| Typical Thermal Resistance <sup>(Note1)</sup> 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)<br>at I <sub>F</sub> =3A<br>at I <sub>F</sub> =5A<br>at I <sub>F</sub> =10A | <b>V<sub>F</sub></b> | TA=25°C  | 0.34 | -     | <b>V</b>  |
|   |                      | TA=125°C | 0.27 | -     |           |
|   |                      | TA=25°C  | 0.38 | -     |           |
|   |                      | TA=125°C | 0.32 | -     |           |
|   |                      | TA=25°C  | 0.46 | 0.52  |           |
|   |                      | TA=125°C | 0.43 | -     |           |
| Maximum Reverse Current at V <sub>R</sub> =45V  | <b>I<sub>R</sub></b> | TA=25°C  | 50   | 100   | <b>uA</b> |
|   |                      | TA=125°C | 9    | -     | <b>mA</b> |

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

**RATINGS AND CHARACTERISTIC CURVES**

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

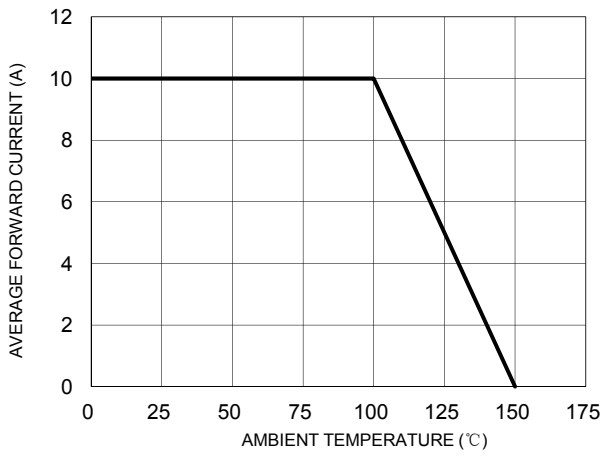


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

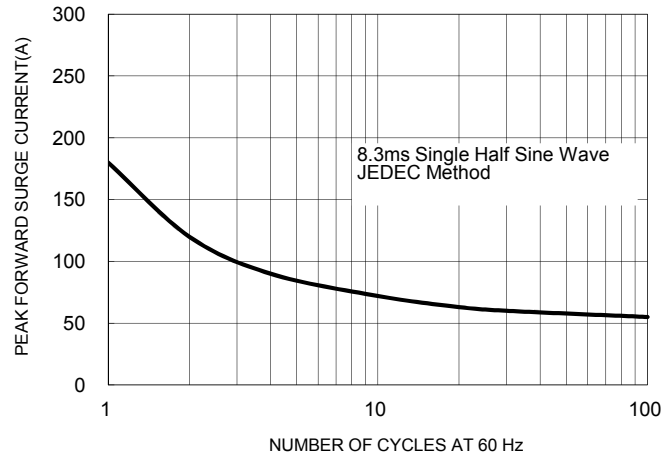


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

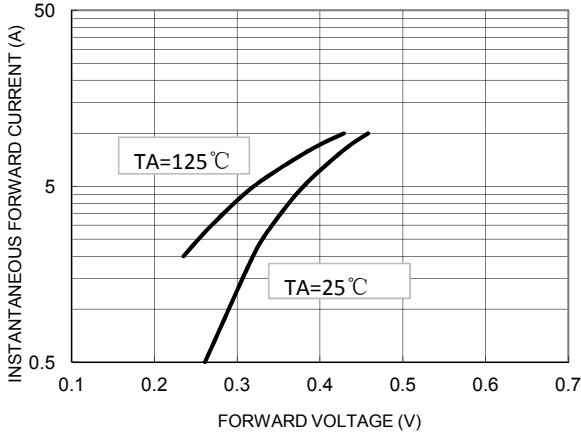
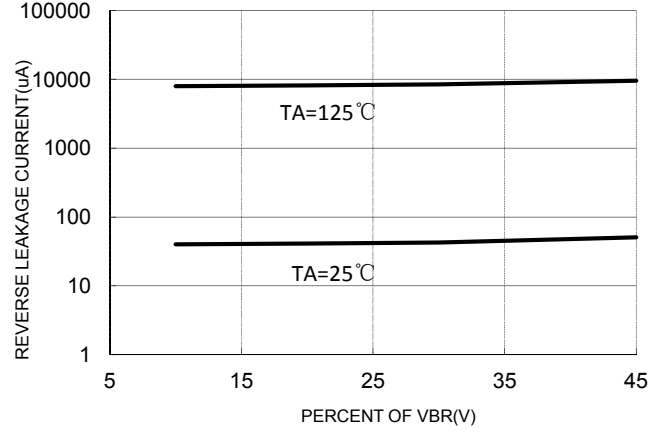
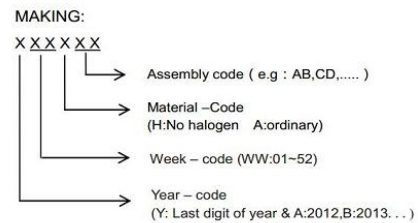
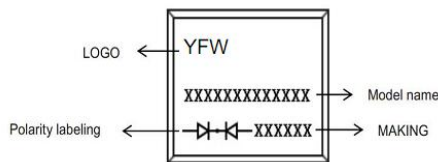


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



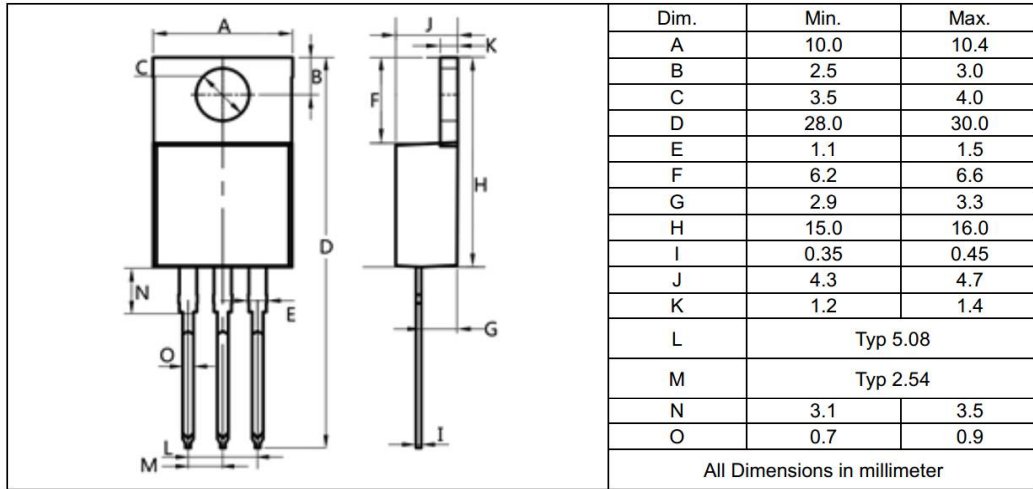
**Ordering information**

| Part Number  | Package  | Unit Weight   | Base Quantity  | Delivery mode              |
|--------------|----------|---------------|----------------|----------------------------|
| SRT20L45CT   | TO-220AB | 0.07oz(1.96g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| SRT20L45FCT  | TO-220F  | 0.06oz(1.74g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| SRT20L45DC-G | TO-263   | 0.04oz(1.16g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| SRT20L45DC   | O-263    | 0.04oz(1.16g) | 800 pcs / reel | 1600pcs/box4000pcs/carton  |

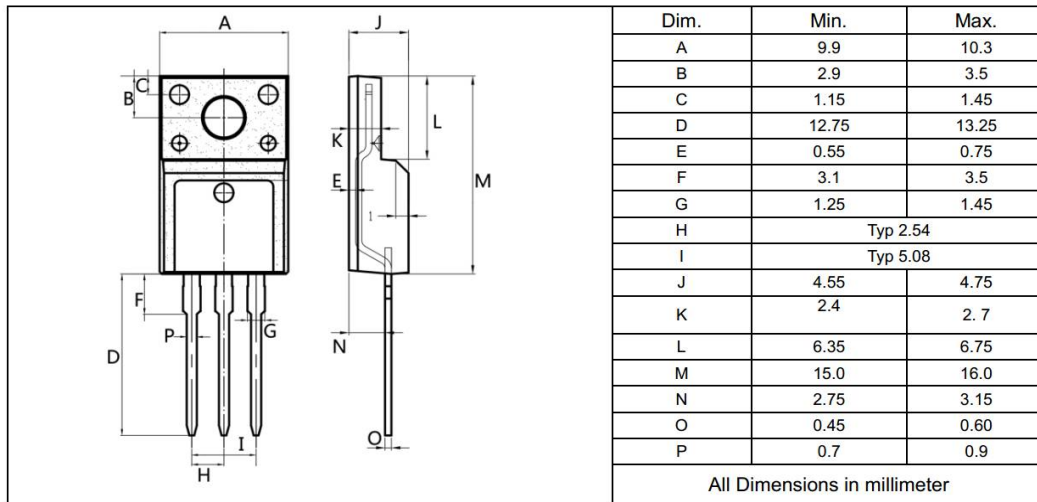
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

**TO-220AB**



**TO-220F**



**TO-263**

