

**Trench MOS Barrier Schottky Rectifier**
**Reverse Voltage - 100 V**
**Forward Current – 40 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*20A</b> |
| <b>V<sub>RRM</sub></b>   | <b>100V</b>  |
| <b>I<sub>FSM</sub></b>   | <b>250A</b>  |
| <b>V<sub>F</sub></b>     | <b>0.66V</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>                  | 100        | <b>V</b>    |
| Maximum RMS voltage   | <b>V<sub>RMS</sub></b>                  | 100        | <b>V</b>    |
| Maximum DC Blocking Voltage                                 | <b>V<sub>DC</sub></b>                   | 100        | <b>V</b>    |
| Maximum Average Forward Rectified Current                   | Per Leg                                 | 20         | <b>A</b>    |
|   | Total                                   | 40         |             |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave     | <b>I<sub>FSM</sub></b>                  | 250        | <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)<br>at I <sub>F</sub> =5A | <b>V<sub>F</sub></b> | TA=25°C                | 0.48     | -     | <b>V</b>  |      |
|  |                      | TA=125°C               | 0.42     | -     |           |      |
|  |                      | at I <sub>F</sub> =10A | TA=25°C  | 0.57  |           | 0.60 |
|  |                      |                        | TA=125°C | 0.54  |           | -    |
|  |                      | at I <sub>F</sub> =20A | TA=25°C  | 0.71  |           | 0.75 |
|  |                      |                        | TA=125°C | 0.66  |           | -    |
| Maximum Reverse Current at V <sub>R</sub> =100V      | <b>I<sub>R</sub></b> | TA=25°C                | 15       | 60    | <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

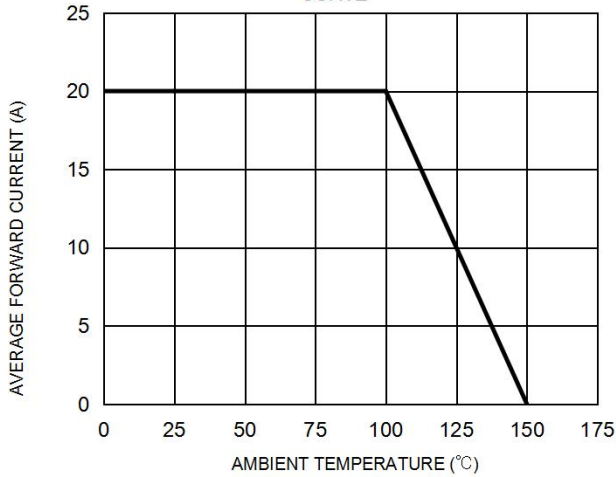


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

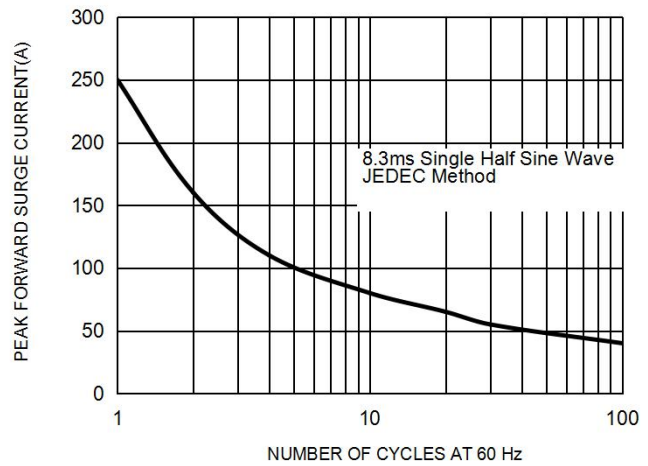


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

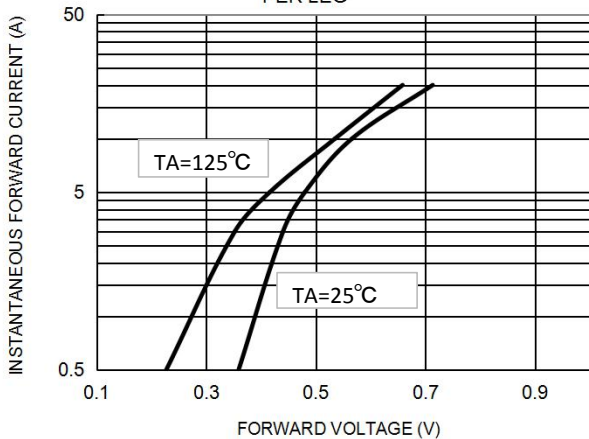
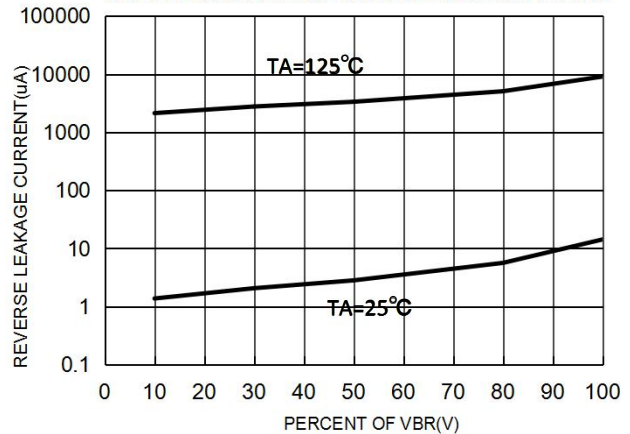


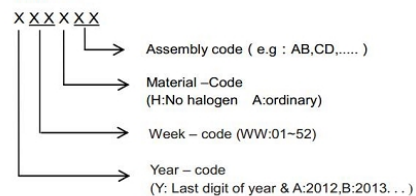
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



**Marking on the body**



**MAKING:**



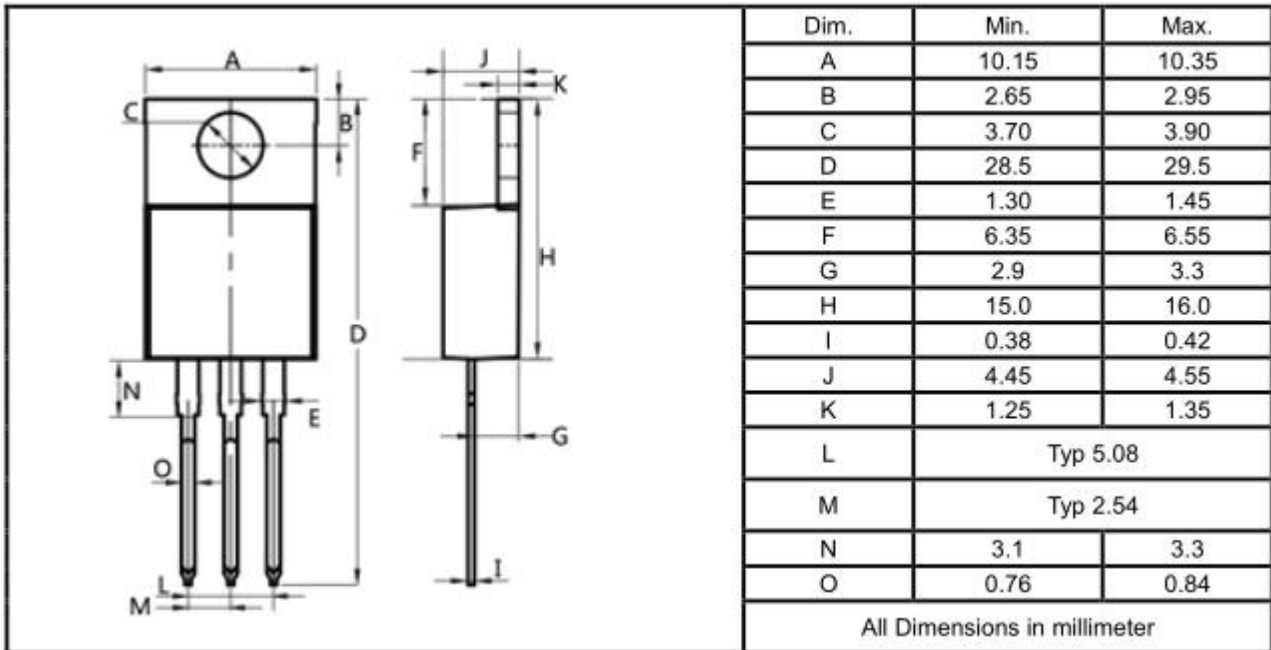
**Ordering information**

| Part Number   | Package  | Unit Weight   | Base Quantity  | Delivery mode              |
|---------------|----------|---------------|----------------|----------------------------|
| SRT40L100CT   | TO-220AB | 0.07oz(1.96g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| SRT40L100FCT  | TO-220F  | 0.06oz(1.74g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| SRT40L100DC   | TO-263   | 0.04oz(1.16g) | 50 pcs / tube  | 1000pcs/box 5000pcs/carton |
| SRT40L100DC-R | TO-263   | 0.04oz(1.16g) | 800 pcs / reel | 800pcs/box4000pcs/carton   |

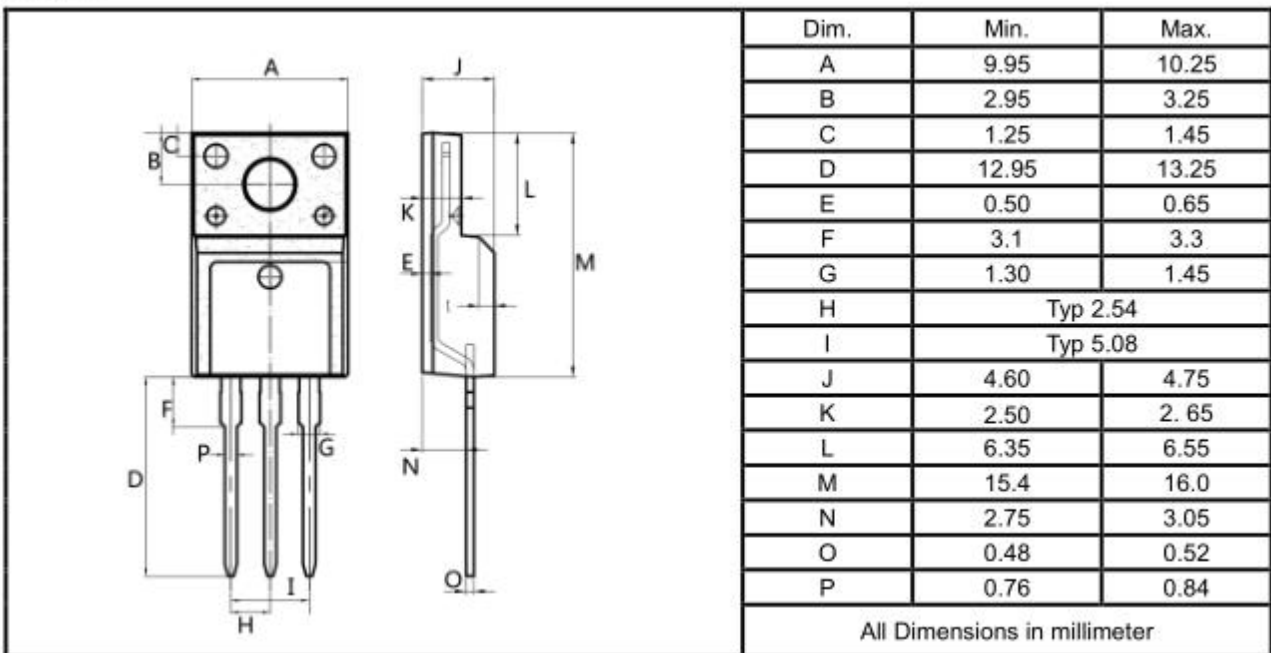
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

**TO-220AB**



**TO-220F**



TO-263

