

Trench MOS Barrier Schottky Rectifier

Reverse Voltage - 200 V

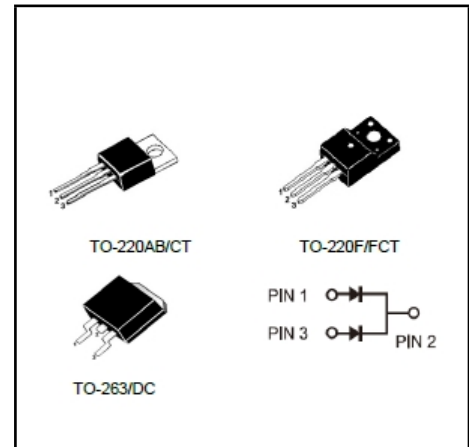
Forward Current - 40 A

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

| | |
|--------------------------|--------------|
| I_o | 2*20A |
| V_{RRM} | 200V |
| I_{FSM} | 250A |
| V_F | 0.75V |
| T_J Max | 175°C |

Maximum Ratings (Per Leg) at Ta=25°C unless otherwise specified

| Parameter | Symbols | Value | Units |
|---|--|------------|-------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 200 | V |
| Maximum RMS voltage | V_{RMS} | 140 | V |
| Maximum DC Blocking Voltage | V_{DC} | 200 | V |
| Maximum Average Forward Rectified Current | Per Leg | 20 | A |
| | Total | 40 | |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave | I_{FSM} | 250 | A |
| Operating Temperature Range | T_J | -50 ~ +175 | °C |
| Storage Temperature Range | T_{STG} | -50 ~ +175 | °C |
| Typical Thermal Resistance (Note1) TO-220AB, TO-263 TO-220F | R_{θJA} / R_{θJC} | 2/4 | °C/W |

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) at I _F =5A | V_F | TA=25°C | 0.72 | - | V | |
| | | TA=125°C | 0.59 | - | | |
| | | at I _F =10A | TA=25°C | 0.78 | | 0.88 |
| | | | TA=125°C | 0.66 | | - |
| | | at I _F =20A | TA=25°C | 0.86 | | 0.92 |
| | | | TA=125°C | 0.75 | | - |
| Maximum Reverse Current at V _R =200V | I_R | TA=25°C | 3 | 10 | uA | |
| | | TA=125°C | 0.3 | - | mA | |

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

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

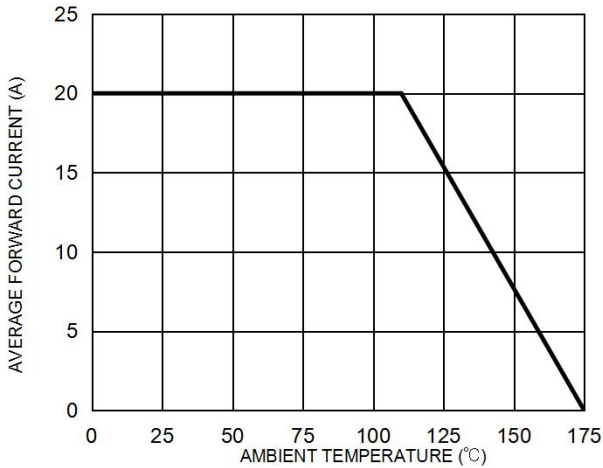


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

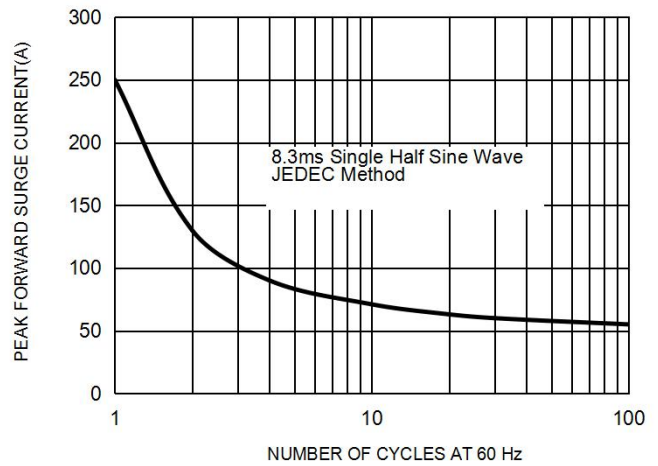


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

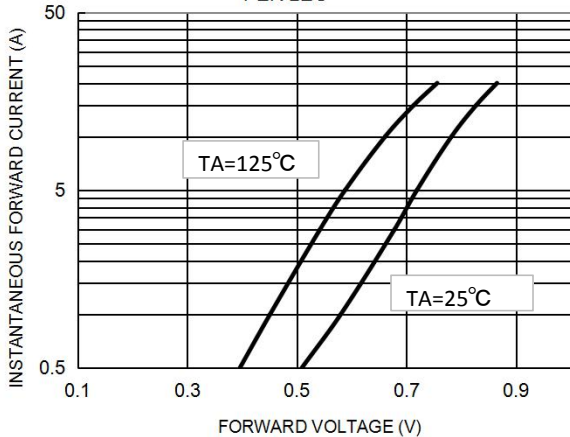
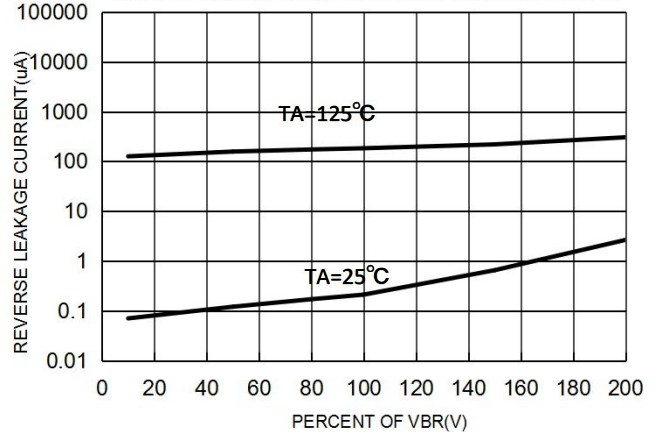
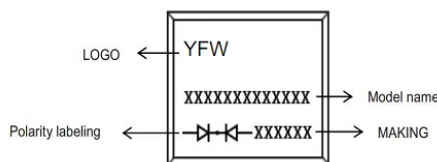


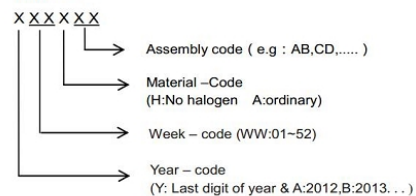
FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Marking on the body



MAKING:



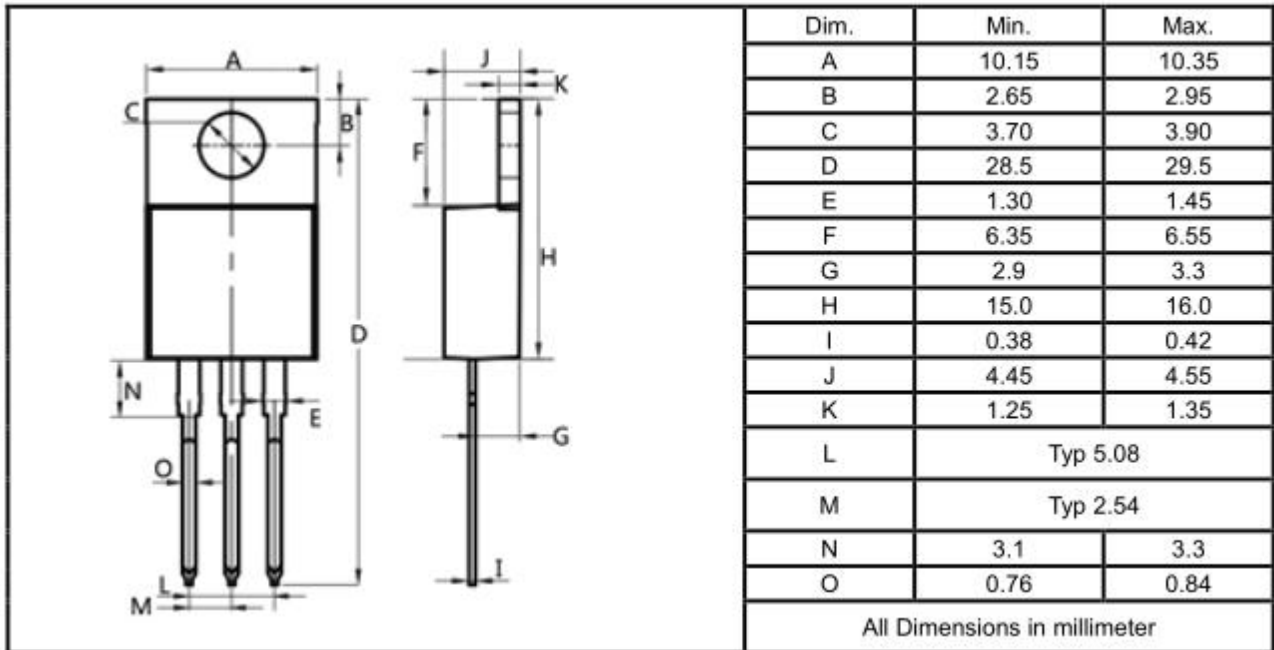
Ordering information

| Part Number | Package | Unit Weight | Base Quantity | Delivery mode |
|---------------|----------|---------------|----------------|----------------------------|
| HRT40L200CT | TO-220AB | 0.07oz(1.96g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| HRT40L200FCT | TO-220F | 0.06oz(1.74g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| HRT40L200DC-G | TO-263 | 0.04oz(1.16g) | 50 pcs / tube | 1000pcs/box 5000pcs/carton |
| HRT40L200DC | TO-263 | 0.04oz(1.16g) | 800 pcs / reel | 1600pcs/box 4000pcs/carton |

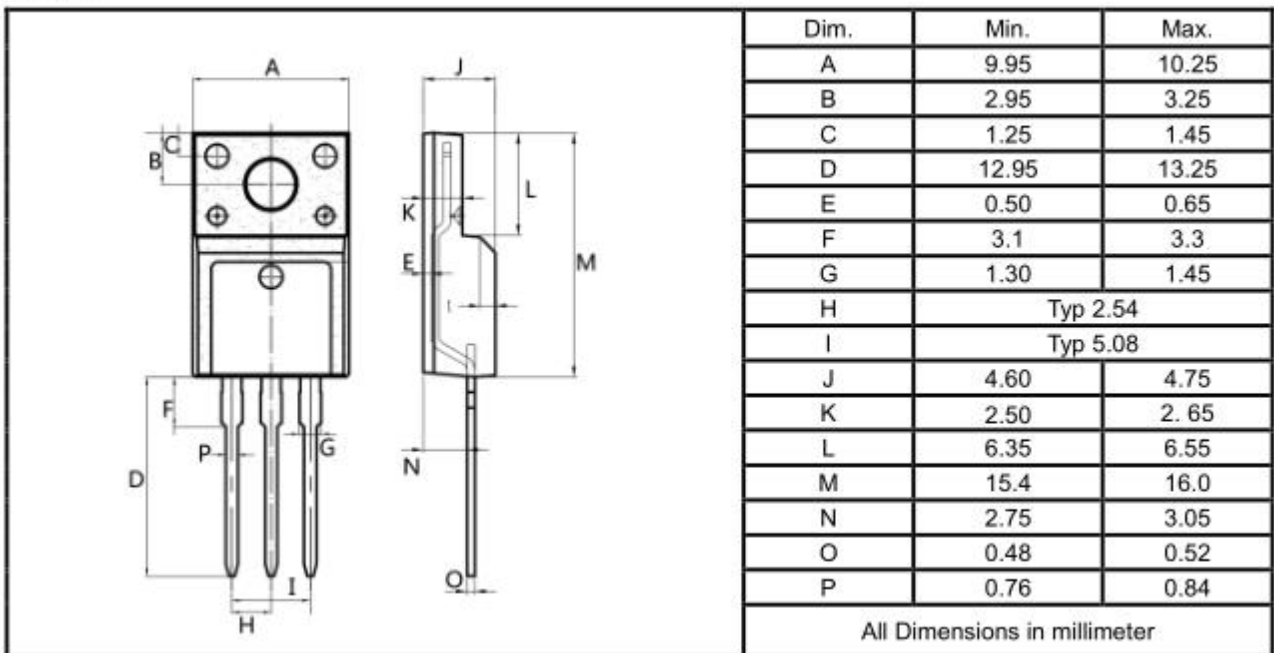
Note: For Halogen Free molding compound, add "H" suffix to part number above.

Package Outline Dimensions millimeters

TO-220AB



TO-220F



TO-263

