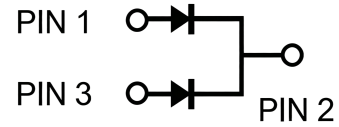


Ultrafast Recovery Rectifiers

| Parameter | Value | Unit |
|-------------|----------|------|
| V_{RRM} | 300 | V |
| $I_{F(AV)}$ | 20(2*10) | A |

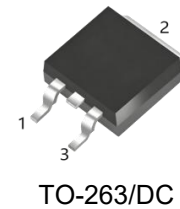
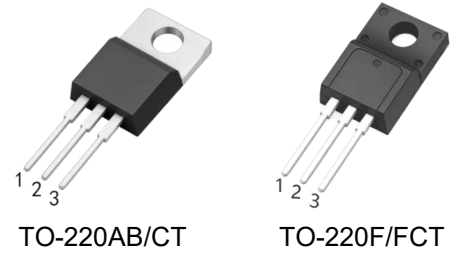


Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

Applications

- Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.



Absolute Maximum Ratings (Ta=25°C, unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|-------------|------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 300 | V |
| Working Peak Reverse Voltage | V_{RWM} | 300 | V |
| Maximum DC Blocking Voltage | V_{DC} | 300 | V |
| Maximum Average Forward Rectified Current | Per Leg | 10 | A |
| | Total | 20 | |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 190 | A |
| Operating Temperature Range | T_J | 175 | °C |
| Storage Temperature Range | T_{STG} | -55 to +175 | °C |
| Typical Thermal Resistance (Note1) | $R_{\theta JC}$ | 2 | °C/W |
| | | 4 | |

Note1: Thermal resistance from Junction to case per leg mounted on heat sink.

Electrical Characteristics(Per Leg) unless otherwise specified

| Parameter | | Symbol | Value | | Unit |
|---|-------------------|----------|-------|------|---------|
| Forward Voltage Drop(Note2) | | V_F | Typ. | Max. | V |
| at $I_F=10A$ | $T_A=25^\circ C$ | | 1.00 | 1.30 | |
| | $T_A=125^\circ C$ | | 0.89 | - | |
| Maximum Reverse Current at $V_R=300V$ | $T_A=25^\circ C$ | I_R | 0.006 | 2 | μA |
| | $T_A=125^\circ C$ | | 1.63 | - | μA |
| Maximum Reverse Recovery Time at $I_F=0.5A, I_R=1A$ | | T_{rr} | - | 35 | ns |

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

Typical Characteristics

FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

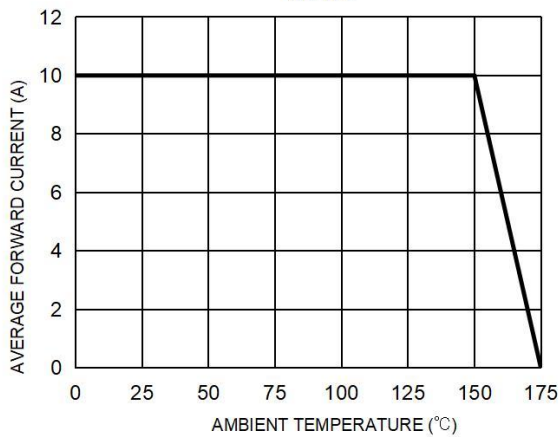


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

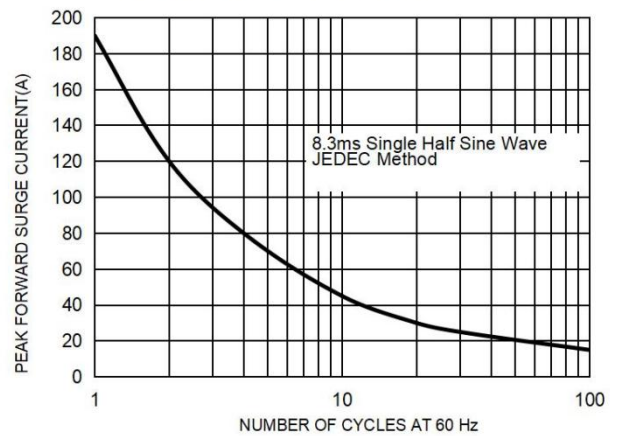


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

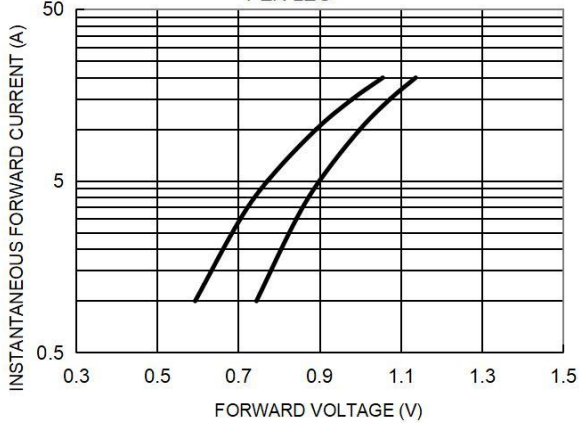
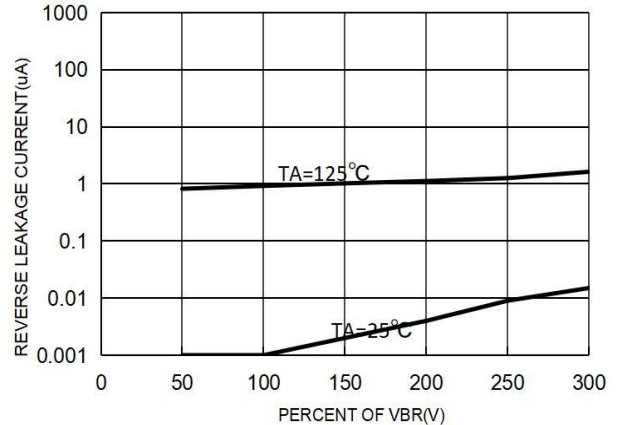
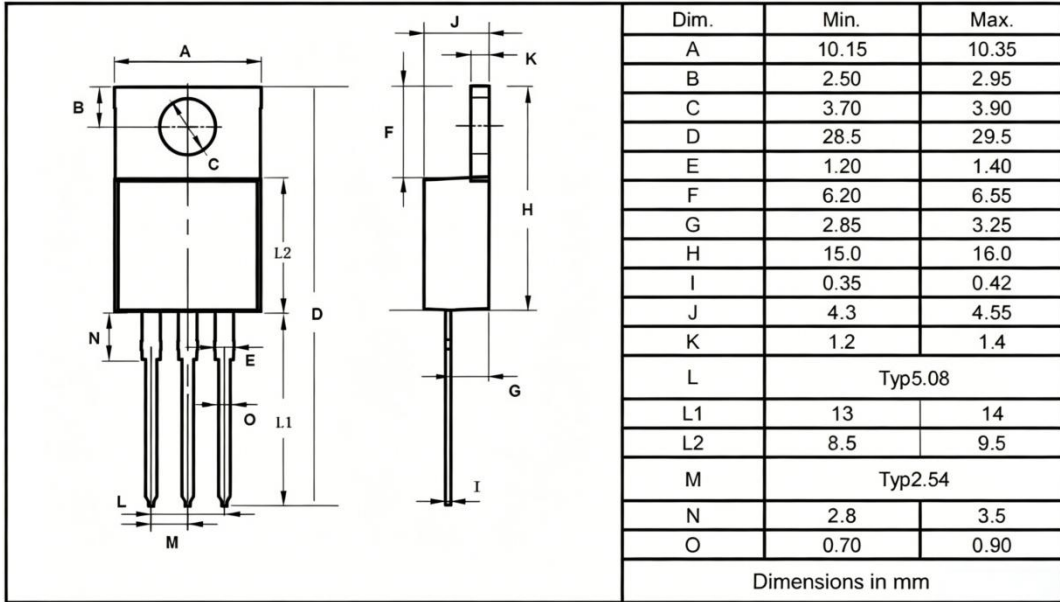


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

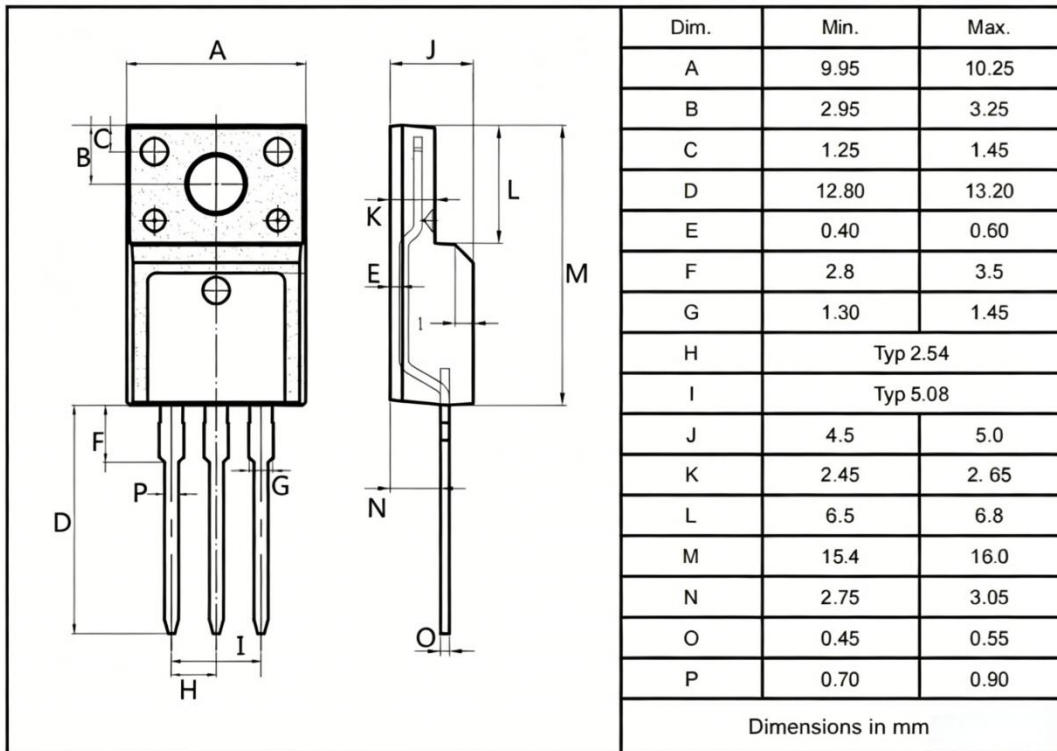


Package Outlines

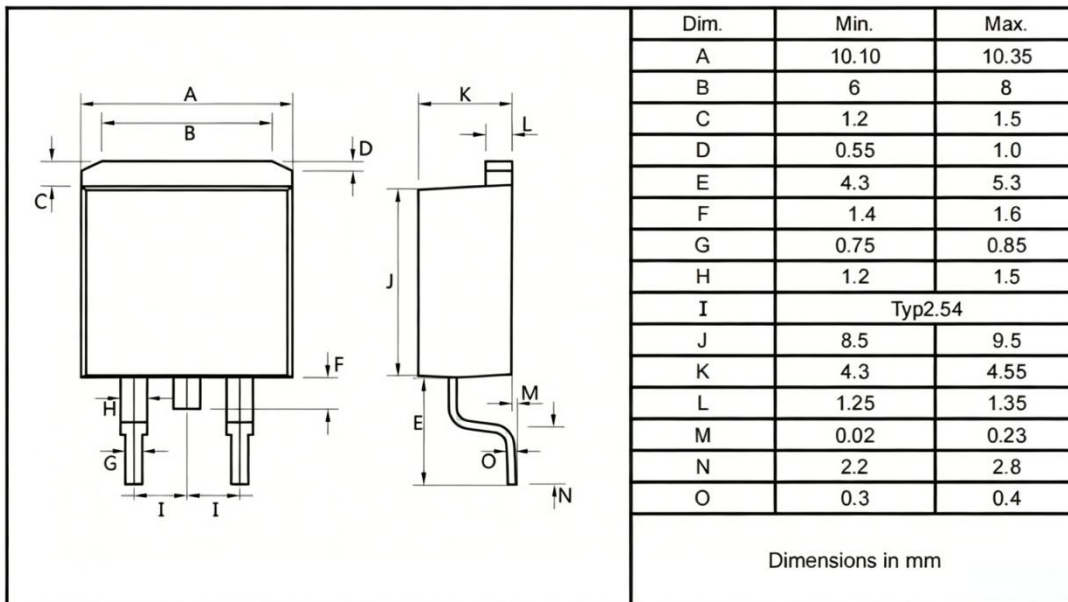
TO-220AB



TO-220F



TO-263



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