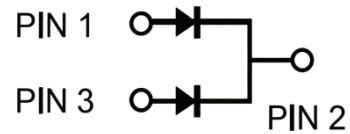


Schottky Barrier Rectifiers

| Parameter | Value | Unit |
|-------------|----------|------|
| V_{RRM} | 45 | V |
| $I_{F(AV)}$ | 40(2*20) | A |



Features

- Common cathode structure
- Low power consumption, high efficiency
- Good high-temperature characteristics
- Over voltage protection loop, high reliability

Applications

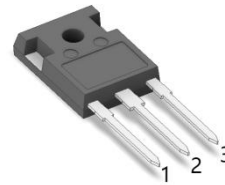
- Power Factor Correction(PFC)
- Switched Mode Power Supply(SMPS)
- Uninterruptible Power Supply(UPS)
- Air Conditioner



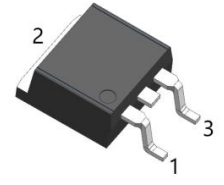
TO-220AB/CT



TO-220F/FCT



TO-247/PT



TO-263/DC

Absolute Maximum Ratings($T_c=25^\circ\text{C}$, unless otherwise noted)

| Parameter | | Symbol | Value | Unit |
|--|---------|-----------------|-------------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | | V_{RRM} | 45 | V |
| Working Peak Reverse Voltage | | V_{RWM} | 45 | V |
| Maximum DC Blocking Voltage | | V_{DC} | 45 | V |
| Maximum Average Forward Rectified Current | Per Leg | $I_{F(AV)}$ | 20 | A |
| | Total | | 40 | |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | | I_{FSM} | 300 | A |
| Maximum Junction Temperature | | T_J | 175 | $^\circ\text{C}$ |
| Storage Temperature Range | | T_{STG} | -55 to +150 | $^\circ\text{C}$ |
| Typical Thermal Resistance | | $R_{\theta JC}$ | | $^\circ\text{C/W}$ |
| TO-220AB, TO-263 | | | 1.6 | |
| TO-220F | | | 3.2 | |
| TO-247 | | | 1.1 | |

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

Electrical Characteristics unless otherwise specified

| Parameter | | Symbol | Value | | Unit |
|----------------------|-------------------|--------|-------|------|---------|
| Forward Voltage Drop | | | Typ. | Max. | |
| $I_F=100\mu A$ | $T_J=25^\circ C$ | V_R | 55 | 65 | V |
| $I_F=20A$ | $T_J=25^\circ C$ | V_F | 0.59 | 0.65 | |
| | $T_J=125^\circ C$ | | 0.57 | 0.6 | |
| $V_R=V_{RRM}$ | $T_J=25^\circ C$ | I_R | 10 | 20 | μA |
| | $T_J=125^\circ C$ | | - | 10 | mA |

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

Typical Characteristics

Fig 1. I_F VS V_F

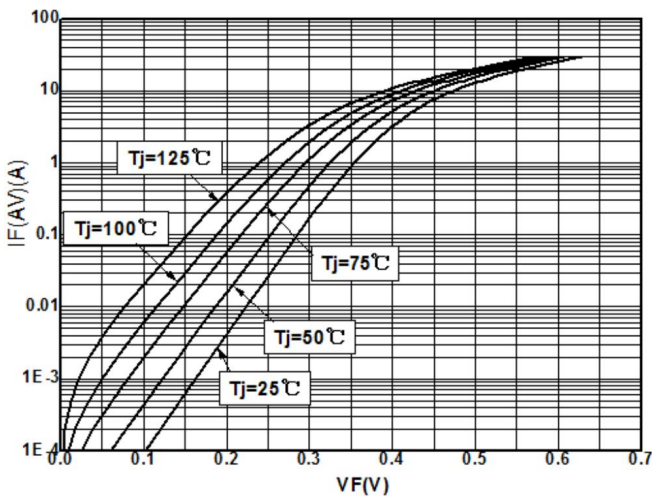


Fig 3. I_F (AV) vs T_C

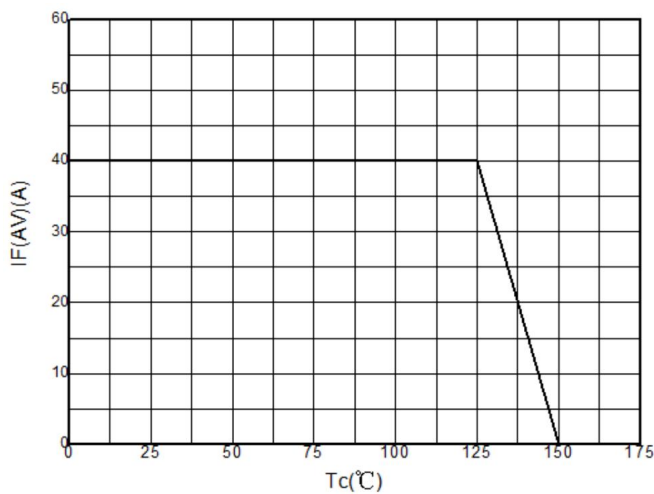


Fig 2. I_R VS V_R

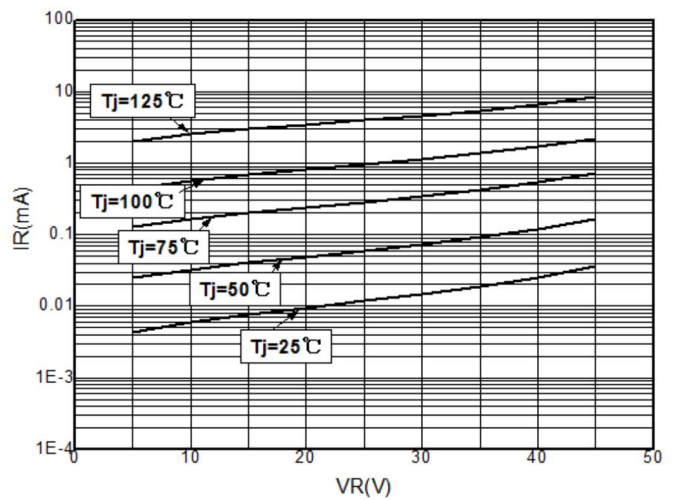
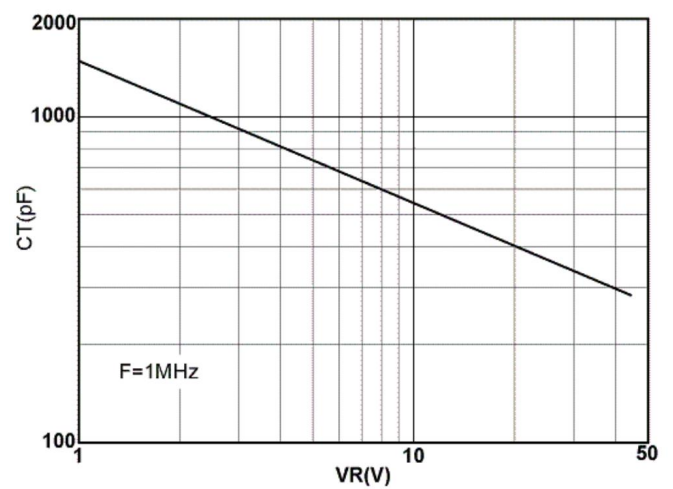
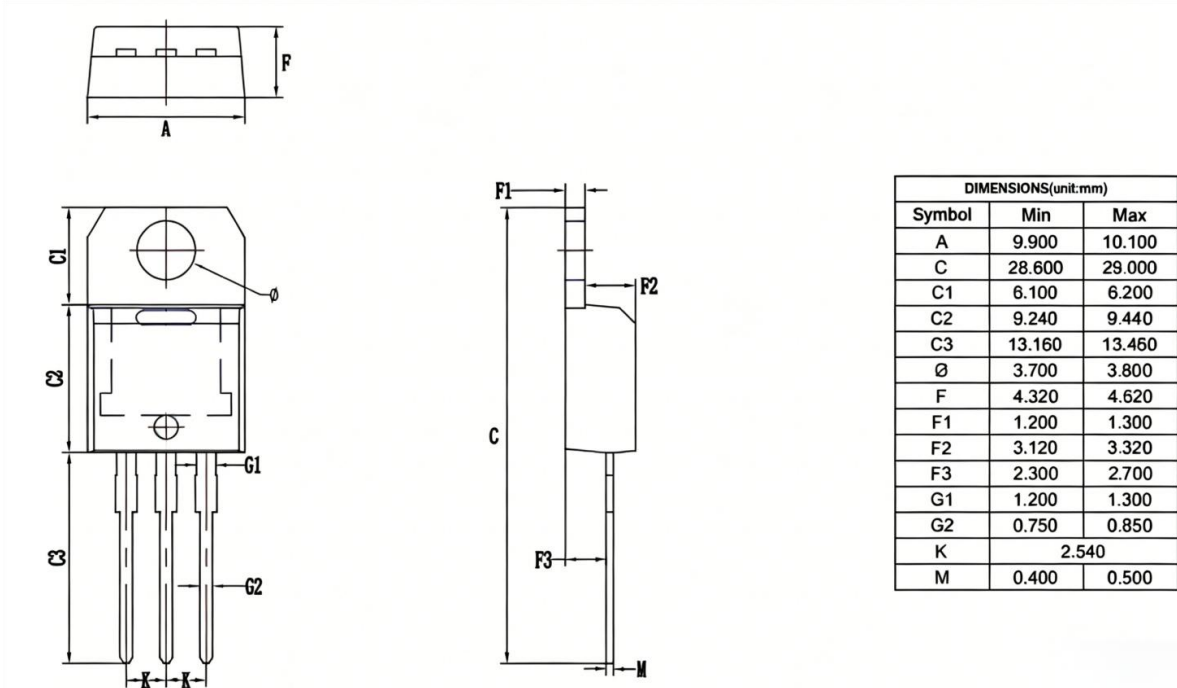


Fig 4. CT vs V_R

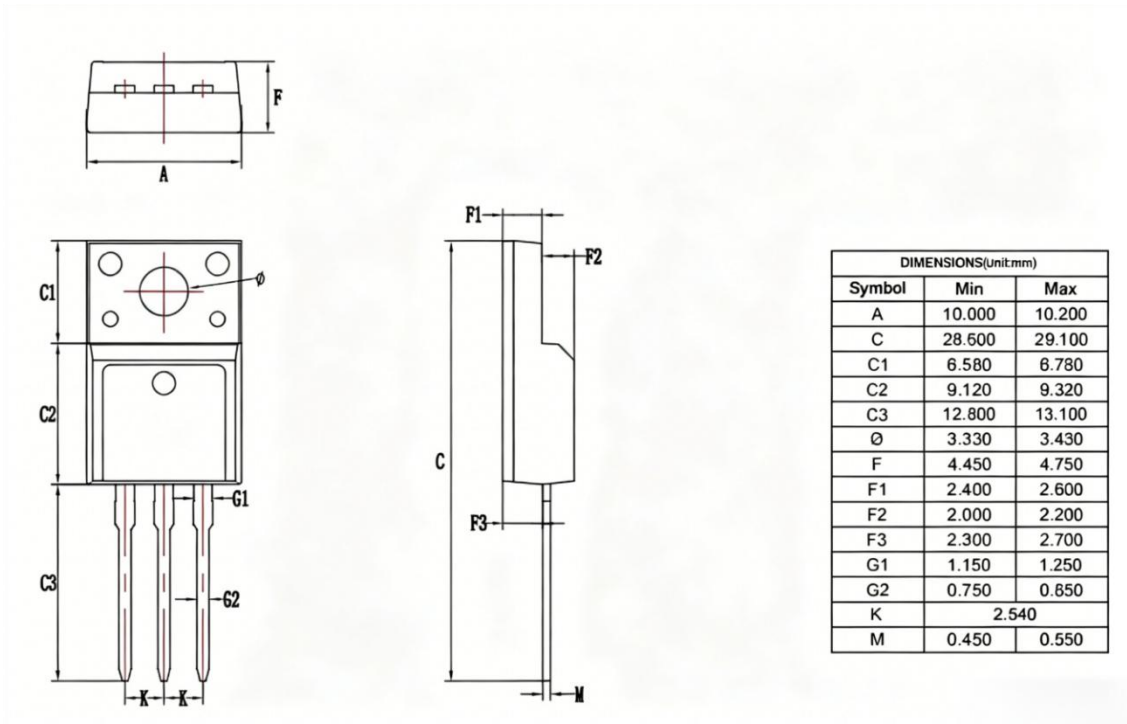


Package Outlines

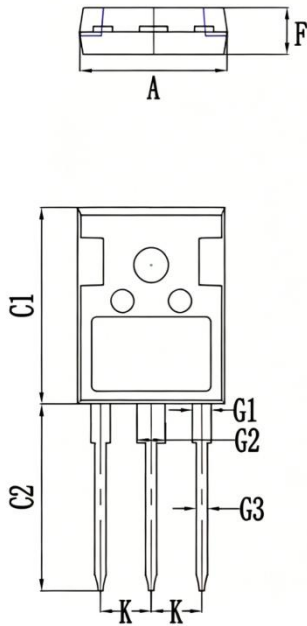
TO-220AB



TO-220F

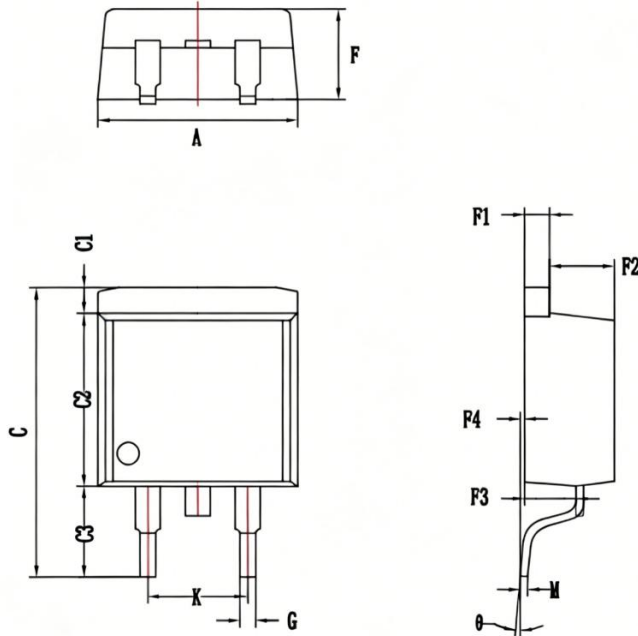


TO-247



| DIMENSIONS(unit:mm) | | |
|---------------------|--------|--------|
| Symbol | Min | Max |
| A | 15.650 | 15.950 |
| C | 40.750 | 41.250 |
| C1 | 20.850 | 21.150 |
| C2 | 19.850 | 20.150 |
| Ø1 | 3.700 | 3.800 |
| Ø2 | 3.500 | 3.600 |
| F | 4.800 | 5.200 |
| F1 | 1.900 | 2.100 |
| F2 | 2.200 | 2.600 |
| G1 | 1.950 | 2.050 |
| G2 | 2.950 | 3.050 |
| G3 | 1.150 | 1.250 |
| K | 5.440 | |
| M | 0.550 | 0.650 |

TO-263



| DIMENSIONS(Unit:mm) | | |
|---------------------|--------|--------|
| Symbol | Min | Max |
| A | 10.000 | 10.200 |
| C | 14.450 | 14.850 |
| C1 | 1.250 | 1.350 |
| C2 | 8.640 | 8.840 |
| C3 | 4.460 | 4.760 |
| F | 4.420 | 4.720 |
| F1 | 1.220 | 1.320 |
| F2 | 3.200 | 3.400 |
| F3 | 2.470 | 2.720 |
| F4 | 0.000 | 0.200 |
| θ | 0° | 8° |
| G | 0.750 | 0.850 |
| K | 5.080 | |
| M | 0.330 | 0.430 |

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