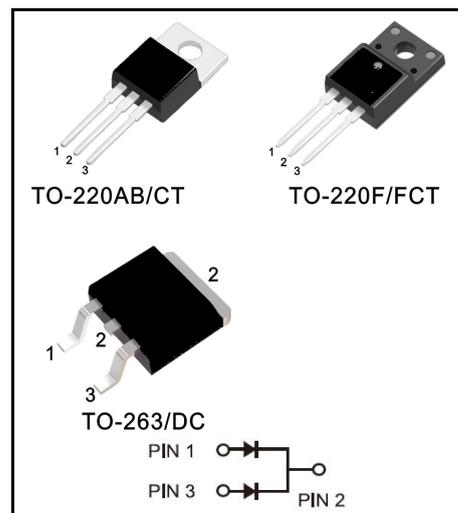


ULTRAFST RECOVERY RECTIFIERS
Reverse Voltage - 600 V
Forward Current - 30 A
FEATURES

- ◆ High speed switching capability
- ◆ High current capability
- ◆ High forward surge capability
- ◆ Low power losses, High efficiency
- ◆ For use in low voltage, high frequency inverters
- ◆ 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*15A |
| V_{RRM} | 600V |
| I_{FSM} | 150A |
| V_F | 1.20V |
| $T_J \text{ Max}$ | 175°C |

Maximum Ratings (Per Leg) at $T_a=25^\circ\text{C}$ unless otherwise specified

| Parameter | Symbols | Value | Units |
|--|---------------------------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 600 | V |
| Maximum RMS voltage | V_{RMS} | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 600 | V |
| Maximum Average Forward Rectified Current | Per Leg | 15 | A |
| | Total | 30 | |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave | I_{FSM} | 150 | A |
| Operating Temperature Range | T_J | 175 | °C |
| Storage Temperature Range | T_{STG} | -40 ~ +175 | °C |
| Typical Thermal Resistance (Note1) TO-220AB/CT TO-220F/FCT TO-263/DC | $R_{\theta JA}$ $R_{\theta JC}$ | 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) | V_F | 1.00 | - | V |
| at $I_F=3A$ | | | | |
| | | TA=125°C | | |
| at $I_F=5A$ | | TA=25°C | | |
| | | TA=125°C | | |
| at $I_F=15A$ | | TA=25°C | 1.30 | |
| | TA=125°C | 1.20 | - | |
| Maximum Reverse Current at $V_R=600V$ | I_R | 0.1 | 1 | uA |
| | | 4 | - | uA |
| Maximum Reverse Recovery Time at $I_F=0.5A$, $I_R=1A$, $IRR=0.25A$ | T_{RR} | - | 40 | nS |

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

RATINGS AND CHARACTERISTIC CURVES

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

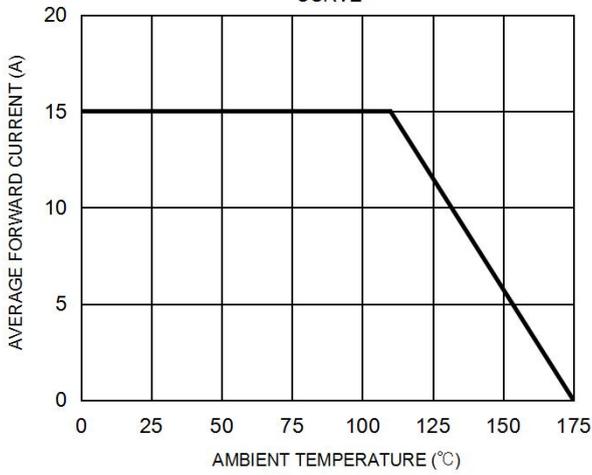


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

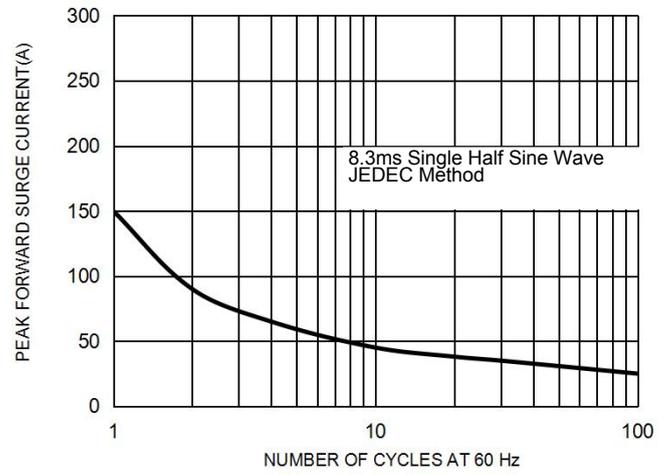


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

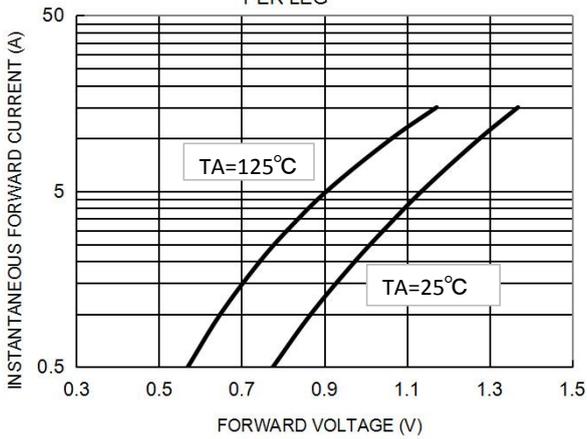
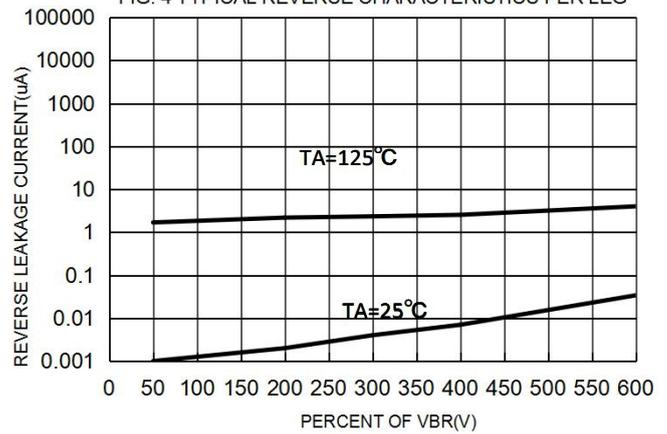


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG



Ordering information

| Model name | Package | Unit Weight | Base Quantity | Packing Quantity |
|------------|----------|---------------|---------------|----------------------------|
| RHRP3060 | TO-220AB | 0.07oz(1.96g) | 50pcs/tube | 1000PCS/Box 5000PCS/Carton |

Package Dimensions

TO-220AB

| Symbol | Millimeter | | Inches | |
|--------|------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 4.30 | 4.70 | 0.169 | 0.185 |
| A1 | 2.52 | 2.82 | 0.099 | 0.111 |
| b | 0.71 | 0.91 | 0.028 | 0.036 |
| b1 | 1.17 | 1.37 | 0.046 | 0.054 |
| c | 0.30 | 0.50 | 0.012 | 0.020 |
| c1 | 1.17 | 1.37 | 0.046 | 0.054 |
| D | 9.90 | 10.20 | 0.390 | 0.402 |
| E | 8.50 | 8.90 | 0.335 | 0.350 |
| E1 | 12.00 | 12.50 | 0.472 | 0.492 |
| e | 2.44 | 2.64 | 0.096 | 0.104 |
| e1 | 4.88 | 5.28 | 0.192 | 0.208 |
| F | 2.60 | 2.80 | 0.102 | 0.110 |
| L | 13.20 | 13.80 | 0.520 | 0.543 |
| L1 | 3.80 | 4.20 | 0.150 | 0.165 |
| Φ | 3.60 | 3.96 | 0.142 | 0.156 |

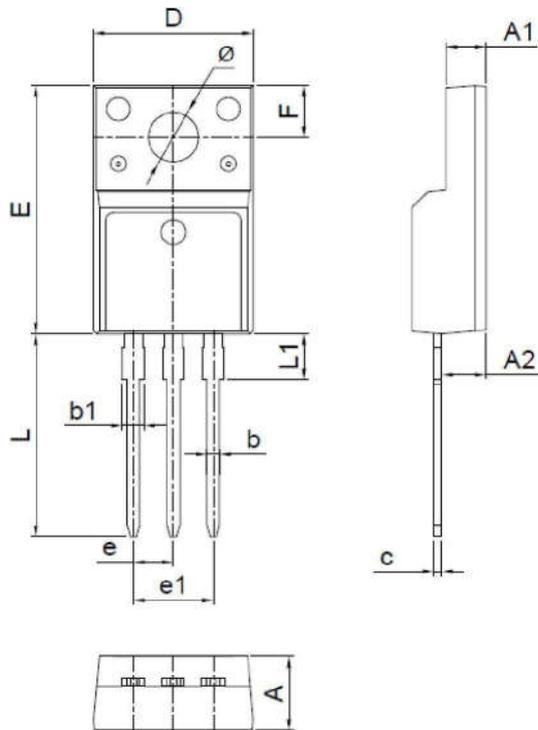
Ordering information

| Model name | Package | Unit Weight | Base Quantity | Packing Quantity |
|------------|---------|---------------|---------------|----------------------------|
| RHRP3060F | TO-220F | 0.06oz(1.74g) | 50pcs/tube | 1000PCS/Box 5000PCS/Carton |

Package Dimensions

TO-220F

| Symbol | Millimeter | | Inches | |
|--------|------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 4.50 | 4.90 | 0.177 | 0.193 |
| A1 | 2.34 | 2.74 | 0.092 | 0.108 |
| A2 | 2.66 | 2.86 | 0.105 | 0.113 |
| b | 0.75 | 0.85 | 0.030 | 0.033 |
| b1 | 1.24 | 1.44 | 0.049 | 0.057 |
| c | 0.40 | 0.60 | 0.016 | 0.024 |
| D | 10.00 | 10.32 | 0.394 | 0.406 |
| E | 15.75 | 16.05 | 0.620 | 0.632 |
| e | 2.44 | 2.64 | 0.096 | 0.104 |
| e1 | 4.88 | 5.28 | 0.192 | 0.208 |
| F | 3.10 | 3.5 | 0.122 | 0.138 |
| L | 13.50 | 13.90 | 0.531 | 0.547 |
| L1 | 2.90 | 3.30 | 0.114 | 0.130 |
| Φ | 3.10 | 3.30 | 0.122 | 0.130 |



Ordering information

| Model name | Package | Unit Weight | Base Quantity | Packing Quantity |
|------------|---------|---------------|---------------|----------------------------|
| RHRP3060M | TO-263 | 0.04oz(1.16g) | 800pcs/reel | 1600pcs/box 8000pcs/Carton |

Package Dimensions

TO-263

| Dim | Millimeter | | Inches | |
|-----|------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 4.30 | 4.70 | 0.169 | 0.185 |
| A1 | 0.00 | 0.15 | 0.000 | 0.006 |
| A2 | 4.30 | 4.55 | 0.169 | 0.179 |
| B | 1.10 | 1.50 | 0.043 | 0.059 |
| b | 0.70 | 0.90 | 0.028 | 0.035 |
| b1 | 1.20 | 1.50 | 0.047 | 0.059 |
| c | 0.30 | 0.60 | 0.012 | 0.024 |
| c1 | 1.17 | 1.37 | 0.046 | 0.054 |
| D | 9.90 | 10.20 | 0.390 | 0.402 |
| E | 8.50 | 8.90 | 0.335 | 0.350 |
| e | 2.44 | 2.64 | 0.096 | 0.104 |
| e1 | 4.88 | 5.28 | 0.192 | 0.208 |
| L | 15.00 | 15.30 | 0.591 | 0.602 |
| L1 | 5.20 | 5.40 | 0.205 | 0.213 |
| L2 | 2.40 | 2.60 | 0.094 | 0.102 |
| L3 | 1.60 | 1.80 | 0.063 | 0.071 |