



UUR1660

DIODE

SWITCHMODE ULTRAFAST POWER RECTIFIER

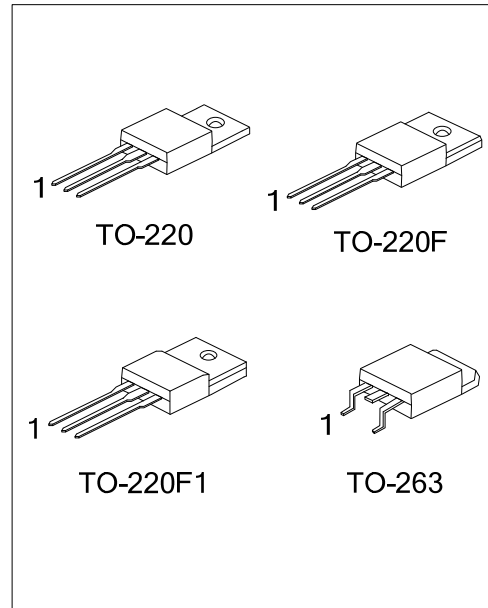
DESCRIPTION

The UTC **UUR1660** is a switchmode ultrafast power rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop and high surge capacity, etc.

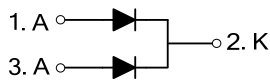
The UTC **UUR1660** is suitable for instrumentation and power management, etc

FEATURES

- * Ultra-fast switching
- * Low forward voltage drop
- * High efficiency and low power loss
- * High surge capacity



SYMBOL



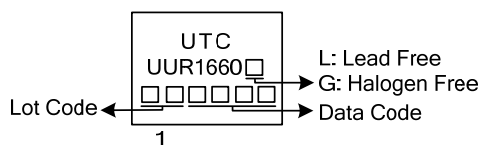
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|-----------------|----------------|----------|----------------|---|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| UUR1660L-TA3-T | UUR1660G-TA3-T | TO-220 | A | K | A | Tube |
| UUR1660L-TF3-T | UUR1660G-TF3-T | TO-220F | A | K | A | Tube |
| UUR1660L-TF1-T | UUR1660G-TF1-T | TO-220F1 | A | K | A | Tube |
| UUR1660L-TQ2-T | UUR1660G-TQ2-T | TO-263 | A | K | A | Tube |
| UUR1660L-TQ2-R | UUR1660G-TQ2-R | TO-263 | A | K | A | Tape Reel |

Note: Pin Assignment: G: Gate D: Drain S: Source

| | |
|-----------------------|--|
| <p>UUR1660L-TA3-T</p> | <p>(1) T: Tube (2) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1 TQ2: TO-263 (3) L: Lead Free, G: Halogen Free and Lead Free</p> |
|-----------------------|--|

MARKING



■ ABSOLUTE MAXIMUM RATINGS

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|---|---------|-------------|------------|------------------|
| DC Blocking Voltage | | V_R | 600 | V |
| Working Peak Reverse Voltage | | V_{RWM} | 600 | V |
| Peak Repetitive Reverse Voltage | | V_{RRM} | 600 | V |
| Average Rectified Forward Current Total Device, (Rated V_R), $T_C=150^\circ\text{C}$ | Per Leg | $I_{F(AV)}$ | 8.0 | A |
| | Total | | 16 | A |
| Peak Rectified Forward Current (Rated V_R , Square Wave, 20kHz), $T_C=150^\circ\text{C}$ | | I_{FM} | 16 | A |
| Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60Hz) | | I_{FSM} | 100 | A |
| Storage Temperature | | T_{STG} | -65 ~ +150 | $^\circ\text{C}$ |
| Operating Junction Temperature | | T_J | -65 ~ +150 | $^\circ\text{C}$ |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL CHARACTERISTICS (PER LEG)

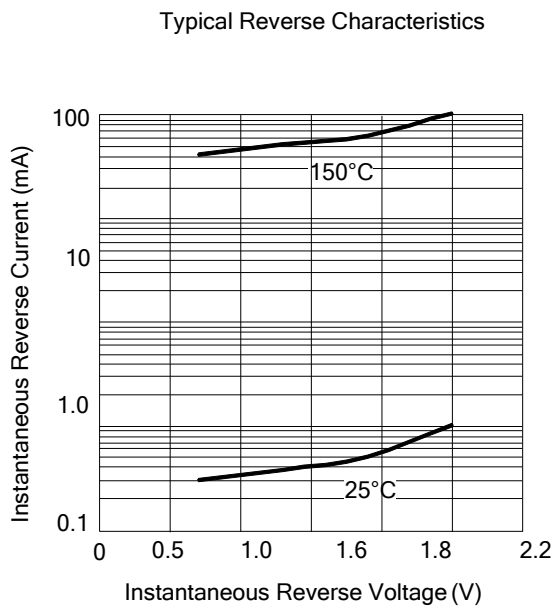
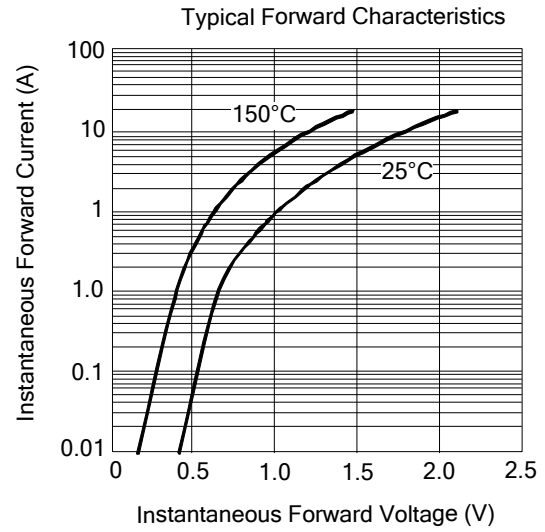
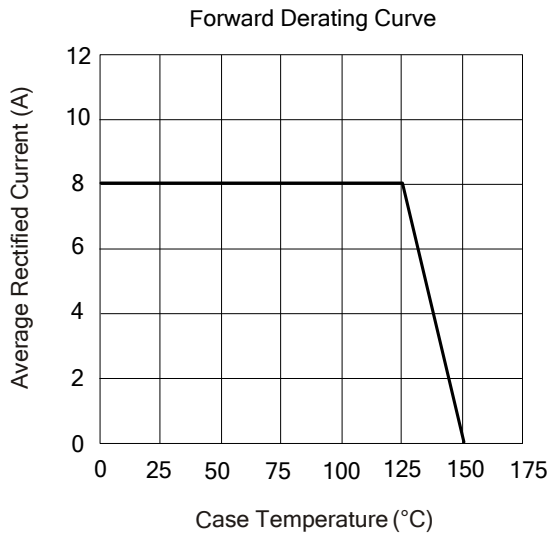
| PARAMETER | | SYMBOL | RATINGS | UNIT |
|------------------|------------------|---------------|---------|--------------------|
| Junction to Case | TO-220/TO-263 | θ_{JC} | 2 | $^\circ\text{C/W}$ |
| | TO-220F/TO-220F1 | | 3.4 | $^\circ\text{C/W}$ |

■ ELECTRICAL CHARACTERISTICS (PER DIODE LEG)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|----------|--|-----|-----|-----|---------------|
| | | | | | | |
| Instantaneous Forward Voltage (Note) | V_F | $I_F=8\text{A}$, $T_C=25^\circ\text{C}$ | | | 1.9 | V |
| | | $I_F=8\text{A}$, $T_C=150^\circ\text{C}$ | | | 1.3 | V |
| Instantaneous Reverse Current (Note) | I_R | Rated dc Voltage, $T_C=25^\circ\text{C}$ | | | 10 | μA |
| | | Rated dc Voltage, $T_C=150^\circ\text{C}$ | | | 500 | μA |
| Reverse Recovery Time | t_{rr} | $I_F=1.0\text{A}$, $di/dt=50\text{A}/\mu\text{s}$ | | | 40 | ns |
| | | $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{REC}=0.25\text{A}$ | | | 35 | ns |

Note: Pulse Test: Pulse Width=300 μs , Duty Cycle \leq 2.0%

■ TYPICAL CHARACTERISTICS



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