



FR104G

DIODE

FAST RECOVERY GLASS PASSIVATED RECTIFIER

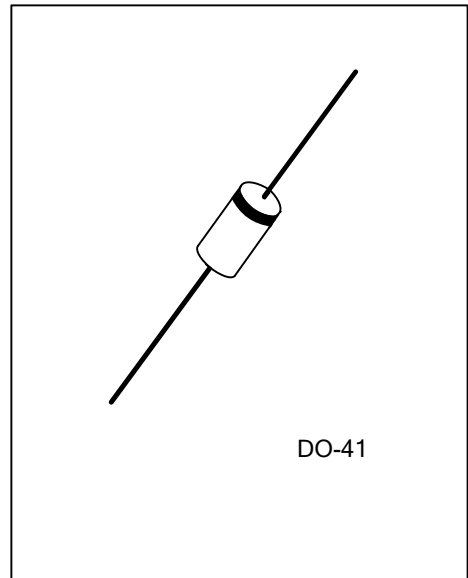
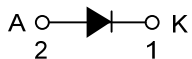
DESCRIPTION

The UTC **FR104G** is a fast recovery glass passivated silicon rectifier, it uses UTC's advanced technology to provide customers with high forward surge current and low reverse leakage, etc.

FEATURES

- * Low reverse leakage
- * High forward surge current capability

SYMBOL



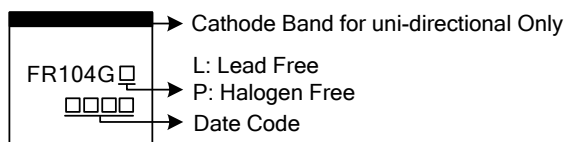
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | Packing |
|-----------------|---------------|---------|----------------|---|-----------|
| Lead Free | Halogen Free | | 1 | 2 | |
| FR104GL-Z41-B | FR104GP-Z41-B | DO-41 | K | A | Tape Box |
| FR104GL-Z41-R | FR104GP-Z41-R | DO-41 | K | A | Tape Reel |

Note: Pin Assignment: A: Anode K: Cathode

| | |
|---|---|
| <p>FR104GL-Z41-B</p> <p>(1) Packing Type (2) Package Type (3) Lead Free</p> | <p>(1) B: Tape Box, R: Tape Reel (2) Z41: DO-41 (3) L: Lead Free, P: Halogen Free</p> |
|---|---|

MARKING



■ ABSOLUTE MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|-----------|----------|------|
| Working Peak Reverse Voltage | V_{RWM} | 400 | V |
| Repetitive Peak Reverse Voltage | V_{RRM} | 400 | V |
| Maximum RMS Reverse Voltage | V_{RMS} | 280 | V |
| DC Blocking Voltage | V_R | 400 | V |
| Average Rectified Output Current ($T_A=105^\circ\text{C}$) | I_O | 1.0 | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I_{FSM} | 30 | A |
| Junction Temperature | T_J | -55~+150 | °C |
| Storage Temperature | T_{STG} | -55~+150 | °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 DATA

| PARAMETER | SYMBOL | RATINGS | UNIT |
|------------------------------|---------------|---------|------|
| Junction to Ambient (Note 3) | θ_{JA} | 50 | °C/W |

■ ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

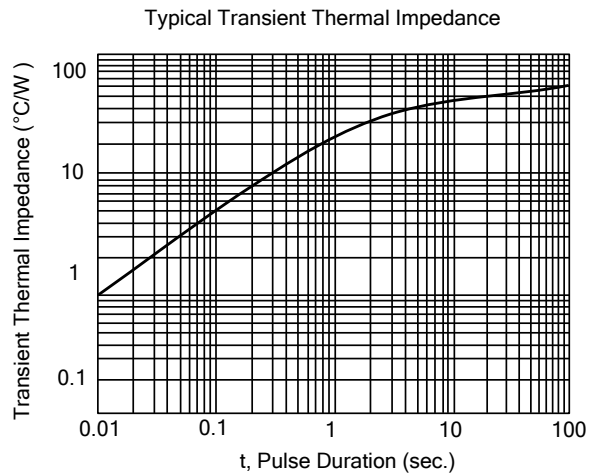
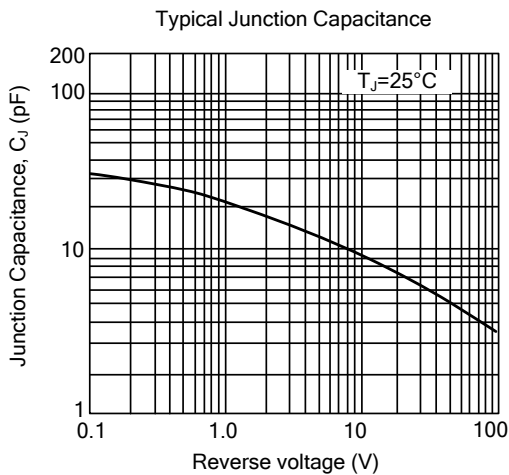
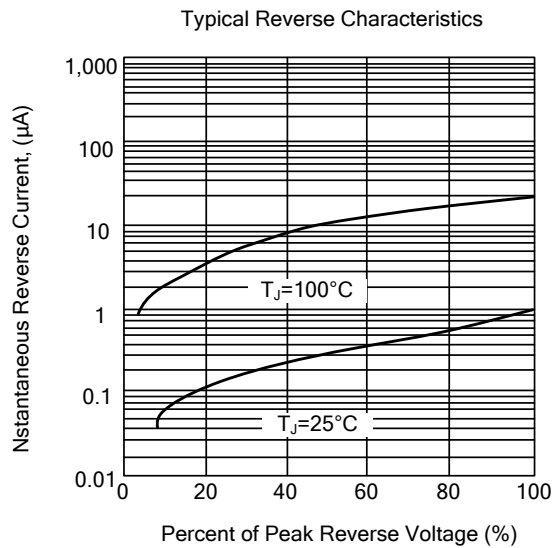
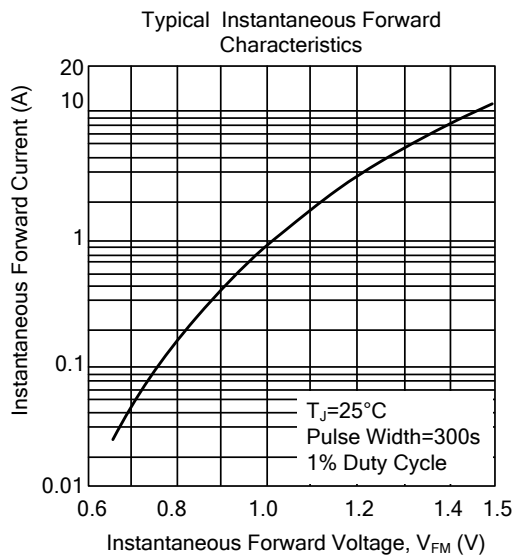
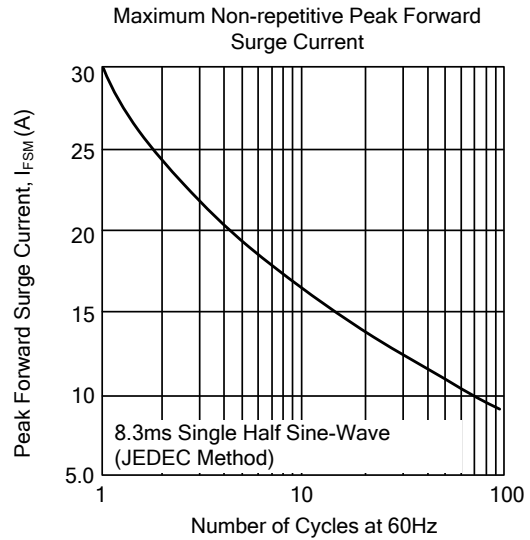
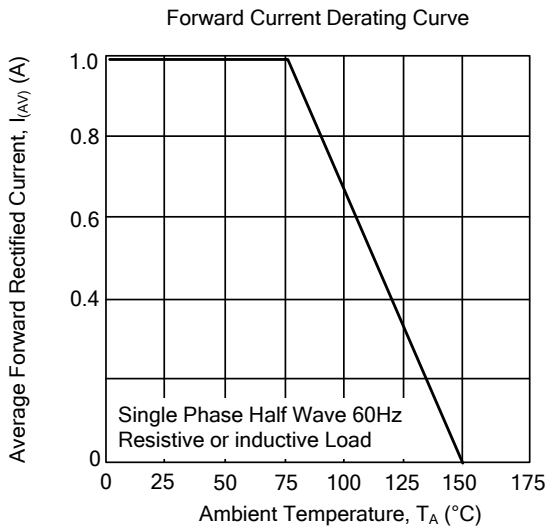
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|----------|-------------------------|-----|------|-----|---------------|
| Instantaneous Forward Voltage | V_{FM} | $I_F=1.0A$ | | | 1.3 | V |
| DC Reverse Current at Rated DC Blocking Voltage | I_{RM} | $T_A=25^\circ\text{C}$ | | | 5.0 | μA |
| | | $T_A=100^\circ\text{C}$ | | | 50 | μA |
| Reverse Recovery Time (Note 1) | t_{rr} | | | | 150 | ns |
| Junction Capacitance (Note 2) | C_J | | | 15.0 | | pF |

Notes: 1. Reverse recovery condition $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted.

TYPICAL CHARACTERISTICS



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