



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT GLASS PASSIVATED SUPER FAST SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

**UCM31PT
THRU
UCM38PT**

Lead free devices

FEATURES

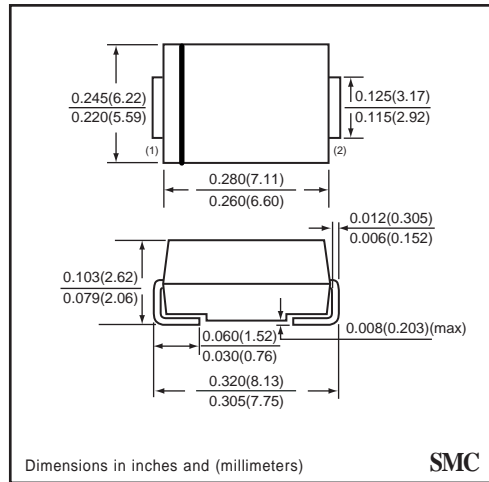
- * For surface mounted applications
- * Low profile package
- * Built-in strain relief
- * Superfast recovery times for high efficiency
- * Metallurgically bonded construction
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Glass passivated junction
- * High temperature soldering guaranteed : 260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC SMC molded plastic
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Weight: 0.003 ounces, 0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | UCM31PT | UCM32PT | UCM33PT | UCM34PT | UCM35PT | UCM36PT | UCM37PT | UCM38PT | UNITS |
|---|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current T _L = 100°C | I _O | 3.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 100 | | | | | | | | Amps |
| Typical Junction Capacitance (Note 1) | C _J | 50 | | | | 30 | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | | | | °C |

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | UCM31PT | UCM32PT | UCM33PT | UCM34PT | UCM35PT | UCM36PT | UCM37PT | UCM38PT | UNITS |
|--|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 3.0 A DC | V _F | 0.95 | | | 1.27 | | 1.75 | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @ TA = 25°C | 10 | | | | | | | | uAmps |
| | @ TA = 100°C | 200 | | | | | | | | uAmps |
| Maximum Reverse Recovery Time (Note 2) | t _{rr} | 35 | | | | 45 | | | | nSec |

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts
 2. Test Conditions : I_F = 0.5 A, I_R = -1.0 A, I_{RR} = -0.25 A

2002-5

RATING CHARACTERISTIC CURVES (UCM31PT THRU UCM38PT)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

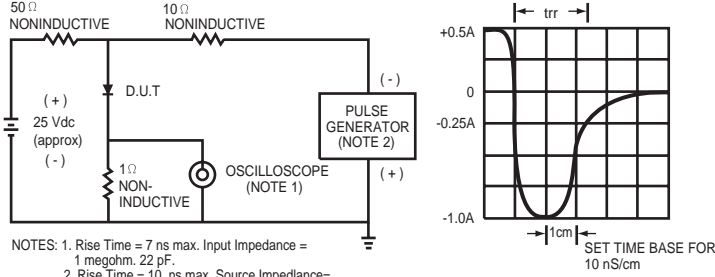


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

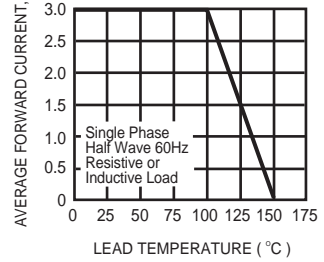


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

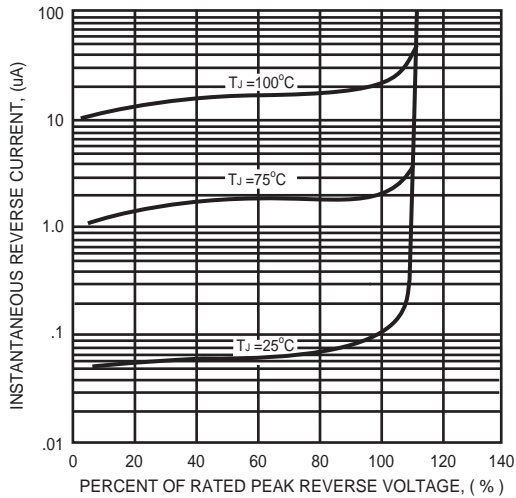


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

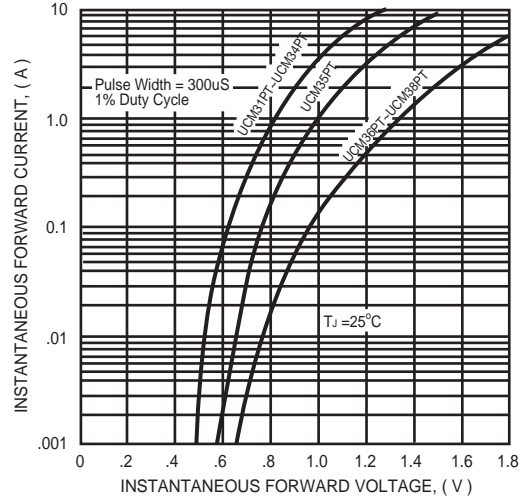


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

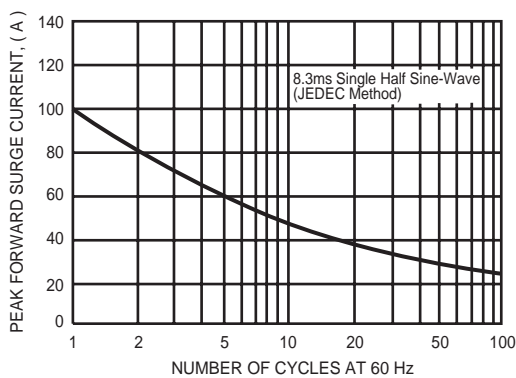


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

