



# CHENMKO ENTERPRISE CO.,LTD

## SURFACE MOUNT GLASS PASSIVATED SUPER FAST SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 4.0 Amperes

Lead free devices

**UPL41CTPT  
THRU  
UPL48CTPT**

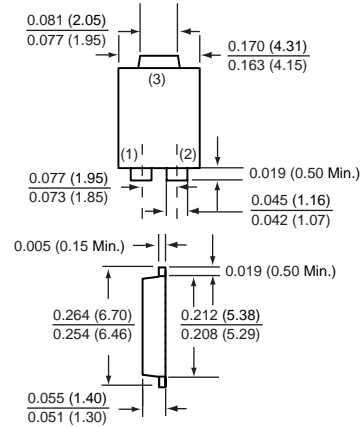
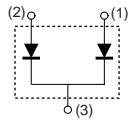
PROVISIONAL SPEC.

### FEATURE

- \*Small Surface Mounting Type. (SMP)
- \* Low forward voltage, high current capability
- \* Low leakage current
- \* Glass passivated junction
- \* High temperature soldering guaranteed :  
260°C/10 seconds at terminals

SMP

### CIRCUIT



Dimensions in inches and (millimeters)

SMP

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

| RATINGS   | SYMBOL   | UPL41CTPT   | UPL42CTPT | UPL43CTPT | UPL44CTPT | UPL45CTPT | UPL46CTPT | UPL47CTPT | UPL48CTPT | UNITS |
|---|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM     | 50          | 100       | 200       | 300       | 400       | 600       | 800       | 1000      | Volts |
| Maximum RMS Voltage   | VRMS     | 35          | 70        | 140       | 210       | 280       | 420       | 560       | 700       | Volts |
| Maximum DC Blocking Voltage   | Vdc      | 50          | 100       | 200       | 300       | 400       | 600       | 800       | 1000      | Volts |
| Maximum Average Forward Rectified Current TL = 100°C  | Io       | 4.0         |           |           |           |           |           |           |           | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 50          |           |           |           |           |           |           |           | Amps  |
| Typical Junction Capacitance (Note 1)   | CJ       | 30          |           |           |           | 20        |           |           |           | pF    |
| Operating and Storage Temperature Range   | TJ, TSTG | -65 to +150 |           |           |           |           |           |           |           | °C    |

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

| CHARACTERISTICS  | SYMBOL       | UPL41CTPT | UPL42CTPT | UPL43CTPT | UPL44CTPT | UPL45CTPT | UPL46CTPT | UPL47CTPT | UPL48CTPT | UNITS |       |
|--|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|
| Maximum Instantaneous Forward Voltage at 2.0 A DC          | VF           | 0.95      |           |           |           | 1.27      | 1.75      |           |           |       | Volts |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage | @ TA = 25°C  | 5.0       |           |           |           |           |           |           |           | uAmps |       |
|  | @ TA = 100°C | 100       |           |           |           |           |           |           |           | uAmps |       |
| Maximum Reverse Recovery Time (Note 2)                     | trr          | 35        |           |           |           | 45        |           |           |           | nSec  |       |

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
2. Test Conditions : IF = 0.5 A, IR = -1.0 A, IRR = -0.25 A

2004-7

# RATING CHARACTERISTIC CURVES ( UPL41CTPT THRU UPL48CTPT )

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

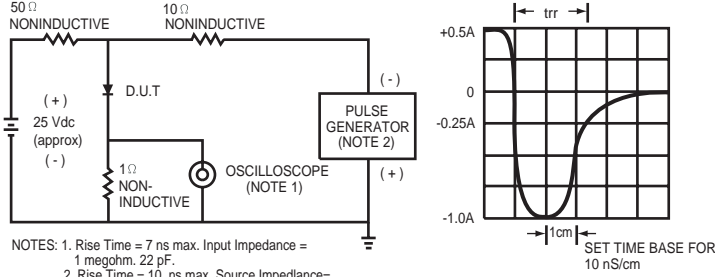


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

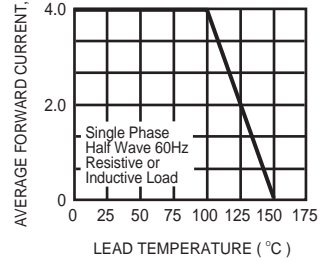


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

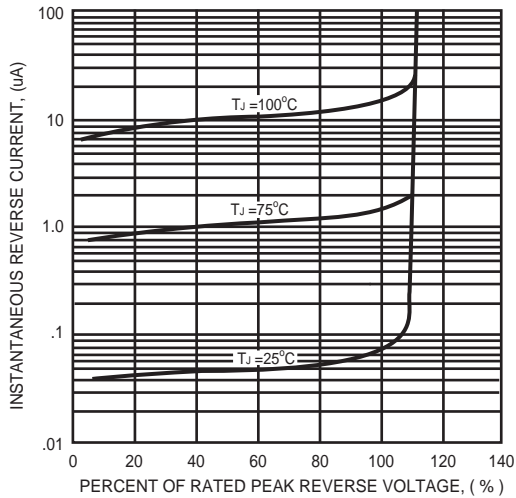


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

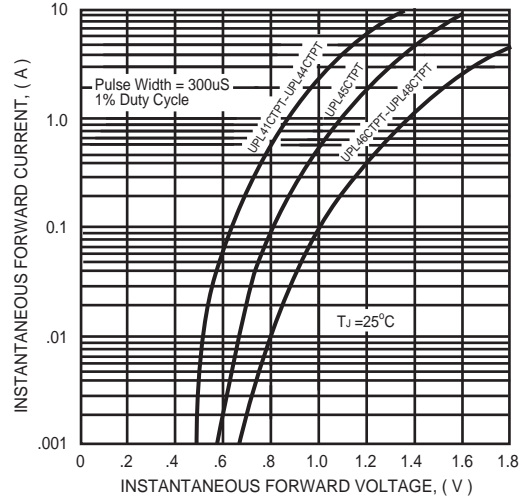


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

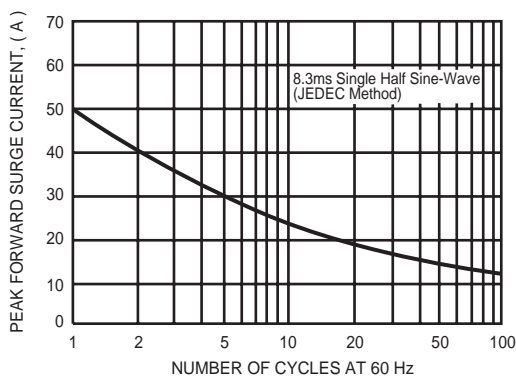


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

