



# CHENMKO ENTERPRISE CO.,LTD

## SURFACE MOUNT GLASS PASSIVATED SUPER FAST SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

**UPL31PT  
THRU  
UPL38PT**

**PROVISIONAL SPEC.**

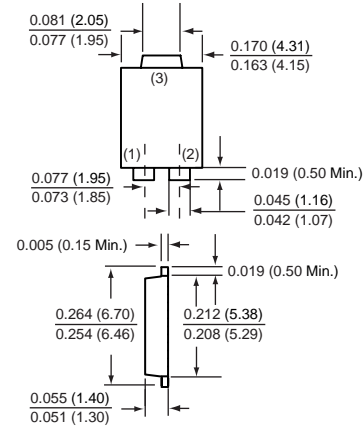
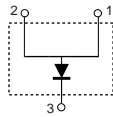
*Lead free devices*

### 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	UPL31PT	UPL32PT	UPL33PT	UPL34PT	UPL35PT	UPL36PT	UPL37PT	UPL38PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current T <sub>L</sub> = 90°C	I <sub>O</sub>	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	80								Amps
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	50				30				pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150								°C

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

CHARACTERISTICS	SYMBOL	UPL31PT	UPL32PT	UPL33PT	UPL34PT	UPL35PT	UPL36PT	UPL37PT	UPL38PT	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC	V <sub>F</sub>	0.95			1.27		1.75			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	5.0								uAmps
	@ TA = 100°C	200								uAmps
Maximum Reverse Recovery Time (Note 2)	t <sub>rr</sub>	35				45				nSec

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts  
2. Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = -1.0 A, I<sub>RR</sub> = -0.25 A

2004-7

# RATING CHARACTERISTIC CURVES ( UPL31PT THRU UPL38PT )

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

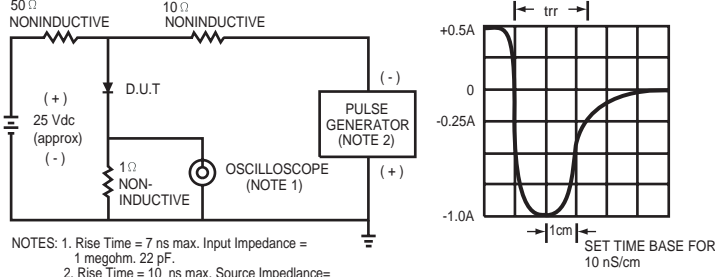


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

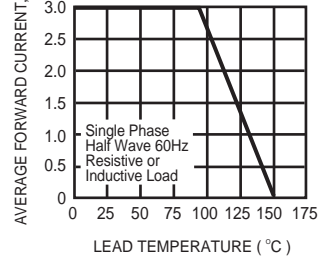


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

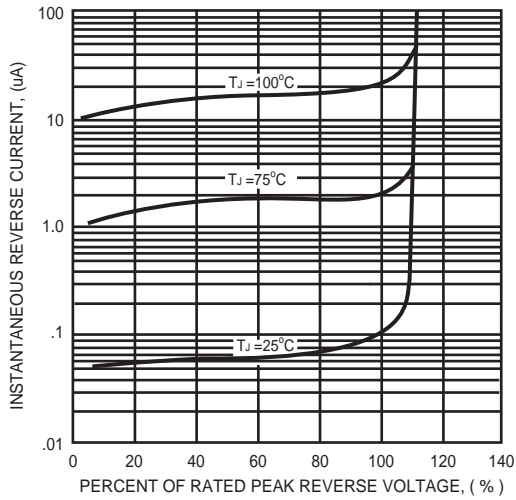


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

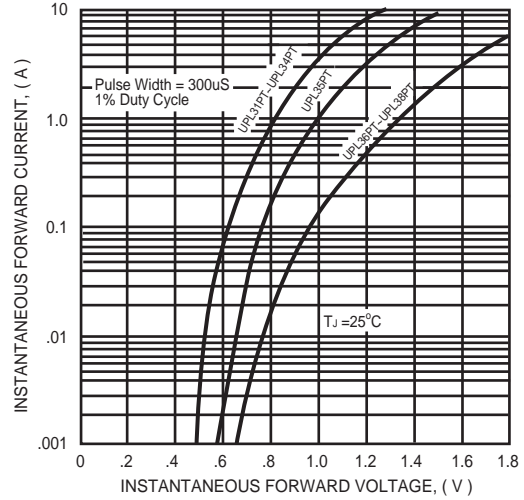


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

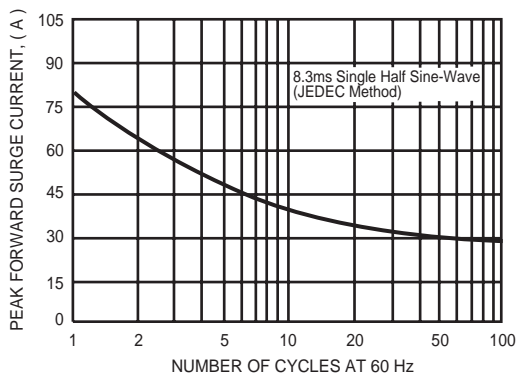


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

