



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

SURFACE MOUNT GLASS PASSIVATED HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 3.0 Amperes

**HPL31PT
THRU
HPL38PT**

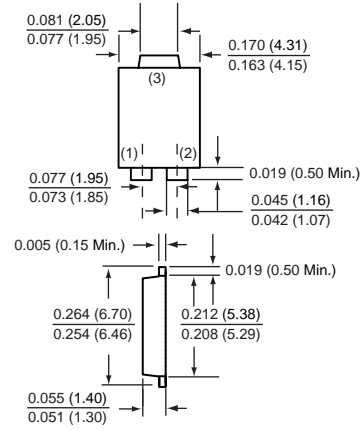
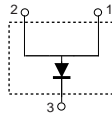
PROVISIONAL SPEC.

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	HPL31PT	HPL32PT	HPL33PT	HPL34PT	HPL35PT	HPL36PT	HPL37PT	HPL38PT	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	3.0								Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	100								Amps	
Typical Junction Capacitance (Note 1)	CJ	70					50				pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to +150								°C	

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

CHARACTERISTICS	SYMBOL	HPL31PT	HPL32PT	HPL33PT	HPL34PT	HPL35PT	HPL36PT	HPL37PT	HPL38PT	UNITS	
Maximum Instantaneous Forward Voltage at 3.0 A DC	VF	1.0			1.3	1.5	1.7			Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	5.0								uAmps	
	@ TA = 100°C	500								uAmps	
Maximum Reverse Recovery Time (Note 2)	trr	50					70				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 (HPL31PT THRU HPL38PT)

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

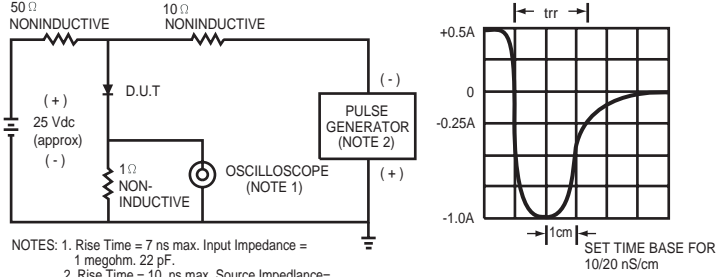


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

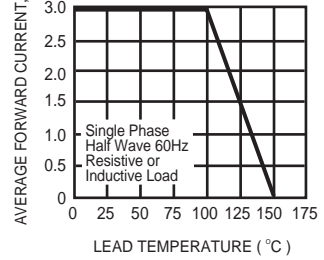


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

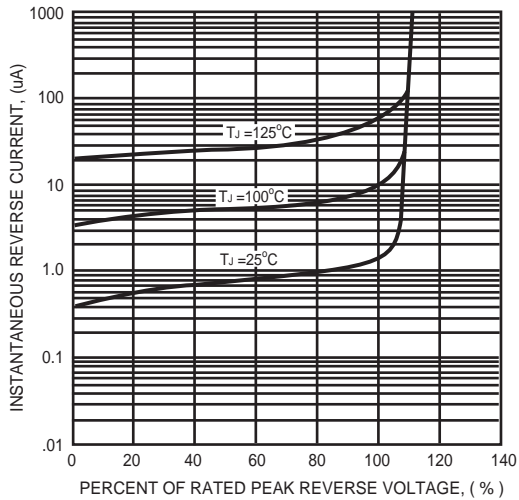


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

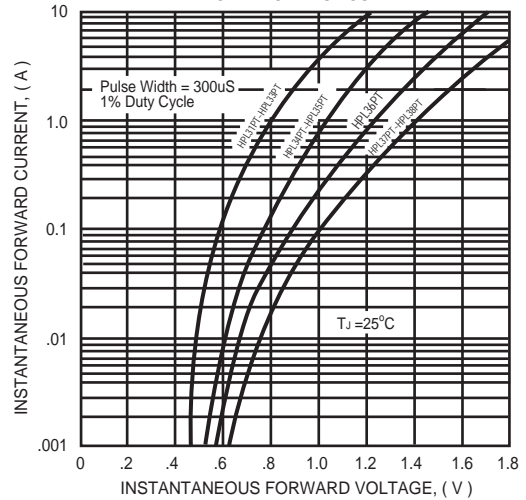


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

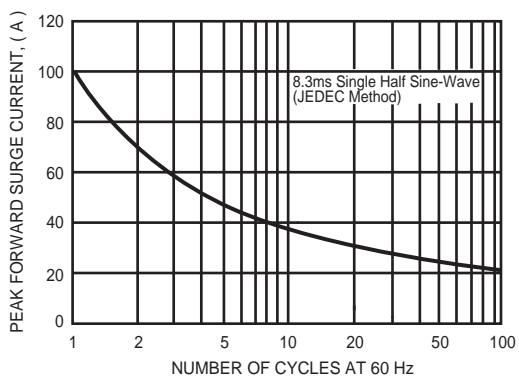


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

