



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**

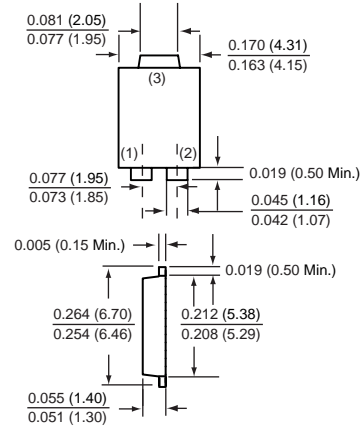
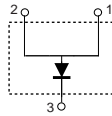
PROVISIONAL SPEC.

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	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	70					50				pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150								°C	

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

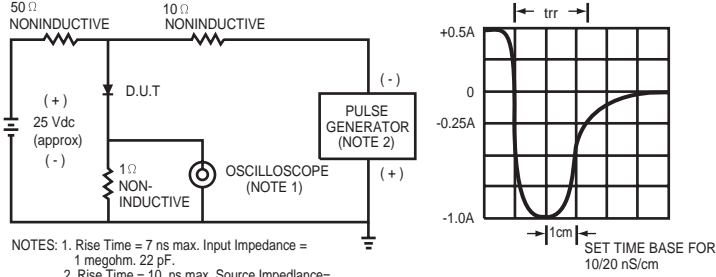
CHARACTERISTICS	SYMBOL	HPL31PT	HPL32PT	HPL33PT	HPL34PT	HPL35PT	HPL36PT	HPL37PT	HPL38PT	UNITS	
Maximum Instantaneous Forward Voltage at 3.0 A DC	V _F	1.0			1.3		1.5		1.7	Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	5.0								uAmps	
	@ TA = 100°C	500								uAmps	
Maximum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

2004-7

RATING CHARACTERISTIC CURVES (HPL31PT THRU HPL38PT)

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



NOTES: 1. Rise Time = 7 ns max. Input Impedance = 1 megohm, 22 pF.
2. Rise Time = 10 ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

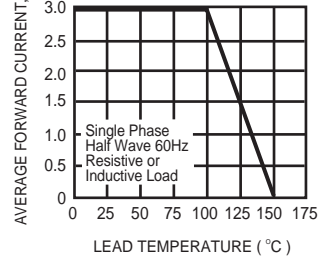


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

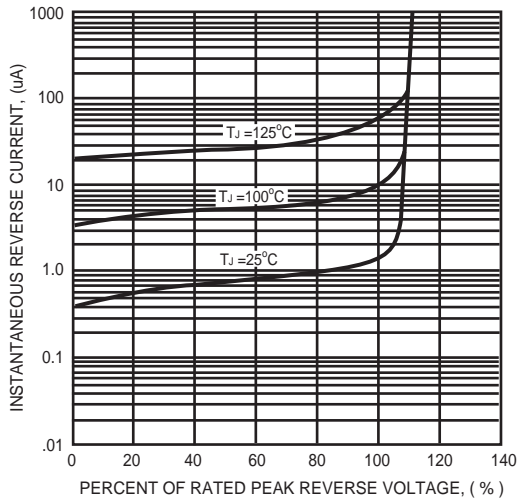


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

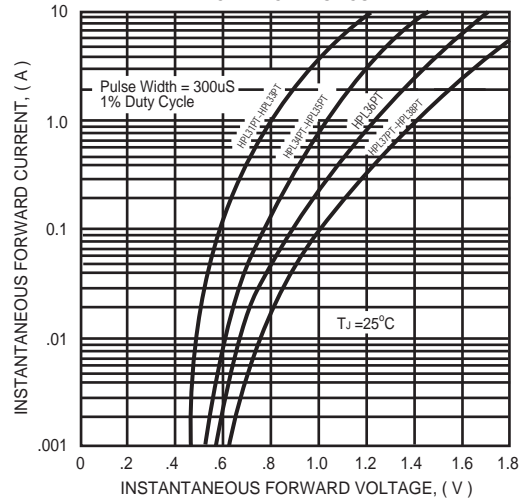


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

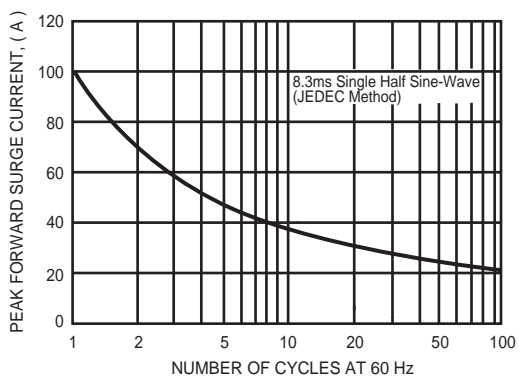


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

