



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT GLASS PASSIVATED HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 2.0 Ampere

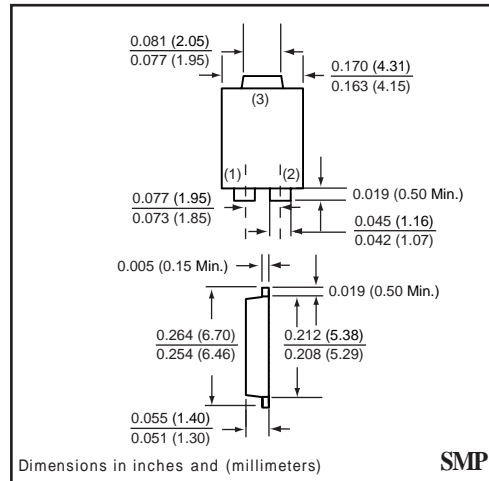
Lead free devices

**HPL21CTPT
THRU
HPL28CTPT**

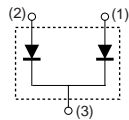
PROVISIONAL SPEC.

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



CIRCUIT



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

| RATINGS | SYMBOL | HPL21CTPT | HPL22CTPT | HPL23CTPT | HPL24CTPT | HPL25CTPT | HPL26CTPT | HPL27CTPT | HPL28CTPT | 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 = 110°C | Io | 2.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 30 | | | | | | | | Amps |
| Typical Junction Capacitance (Note 1) | CJ | 15 | | | | 12 | | | | pF |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to +150 | | | | | | | | °C |

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

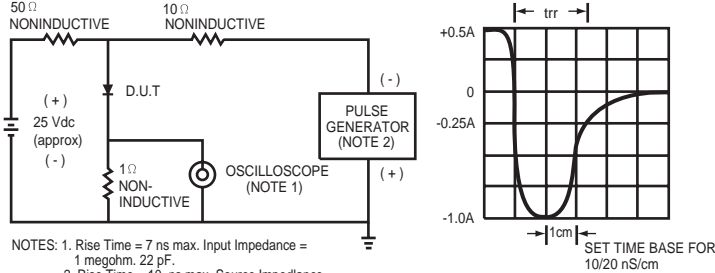
| CHARACTERISTICS | SYMBOL | HPL21CTPT | HPL22CTPT | HPL23CTPT | HPL24CTPT | HPL25CTPT | HPL26CTPT | HPL27CTPT | HPL28CTPT | UNITS | |
|--|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|------|
| Maximum Instantaneous Forward Voltage at 1.0 A DC | VF | 1.0 | | | 1.3 | 1.5 | 1.7 | | | Volts | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage at TA = 25°C | IR | 5.0 | | | | | | | | uAmps | |
| Maximum Full Load Reverse Current Average, Full Cycle at TA = 55°C | | 100 | | | | | | | | 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 (HPL21CTPT THRU HPL28CTPT)

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

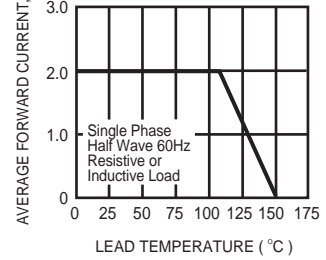


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

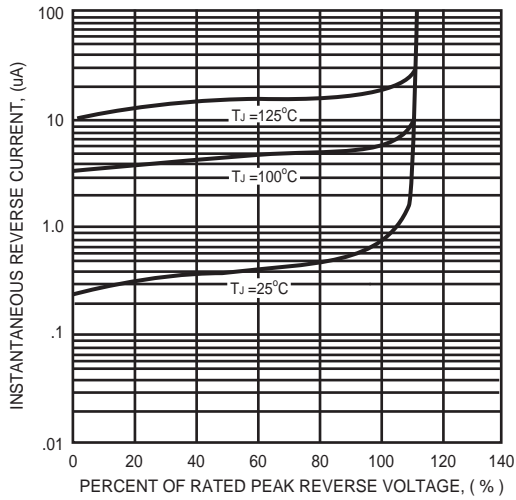


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

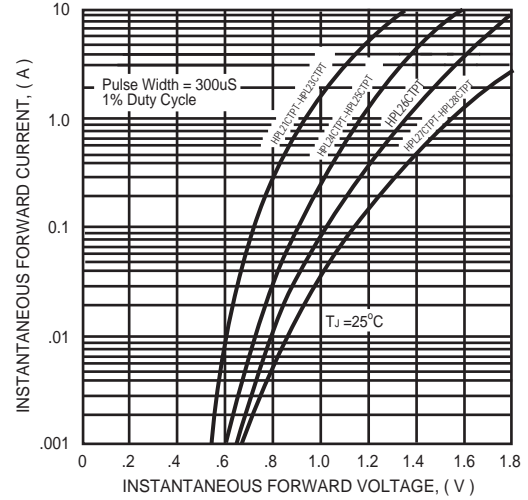


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

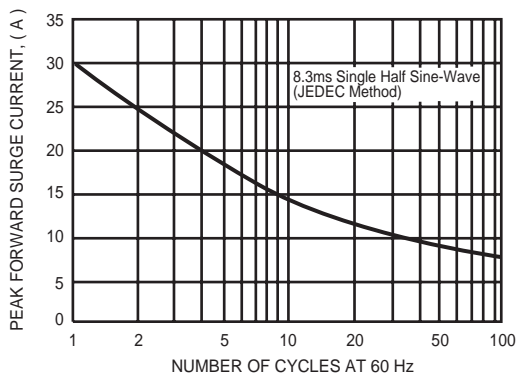


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

