



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

SURFACE MOUNT

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 40 Volts CURRENT 6.0 Amperes

MPL640ACTPT

PROVISIONAL SPEC.

APPLICATION

- * DC to DC Converters
- * Switch- Mode Power Supplies
- * Notebook PC

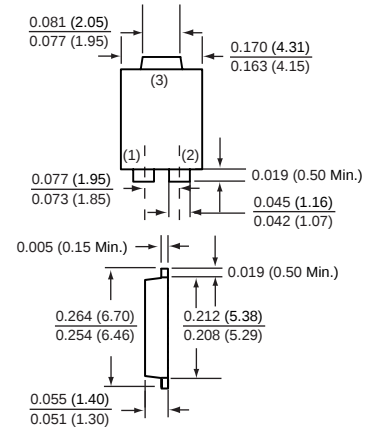
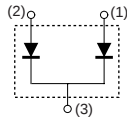
FEATURE

- * Small Surface Mounting Type. (SMP)
- * High speed ($T_{RR}=8.0\text{ns}$ TYP.)
- * Low Power Loss, High Efficiency
- * Low Forward Voltage Drop
- * Peak Forward Surge Current Is 50A.
- * Schottky Diode Array

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SMP

CIRCUIT



Dimensions in inches and (millimeters)

SMP

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	SYMBOL	MPL640ACTPT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	Volts
Maximum RMS Voltage	V_{RMS}	28	Volts
Maximum DC Blocking Voltage	V_{DC}	40	Volts
Maximum Average Forward Rectified Current	I_O	6.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50	Amps
Typical Junction Capacitance (Note 2)	C_J	130	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	15	$^\circ\text{C} / \text{W}$
Operating Temperature Range	T_J	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS	SYMBOL	MPL640ACTPT	UNITS
Maximum Instantaneous Forward Voltage at 3.0 A DC (Note 1)	V_F	0.50	Volts
Maximum Average Reverse Current (Note 1)	I_R	10	μAmps
at Rated DC Blocking Voltage		20	mAmps

NOTES : 1. Pulse test : 300 μs pulse width, 1% duty cycle
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts
3. P.C.B. mounted 0.31 x 0.31" (8 x 8mm) copper pad areas

2004-8

RATING CHARACTERISTIC CURVES (MPL640ACTPT)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

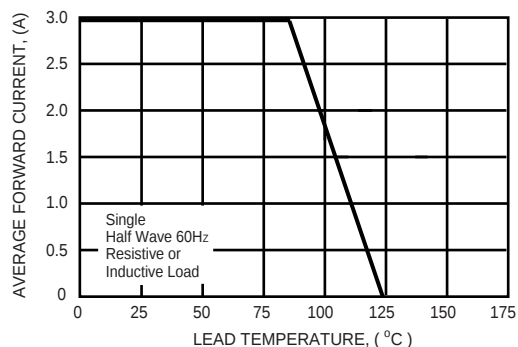


FIG. 2 - INSTANTANEOUS FORWARD CURRENT, (A)

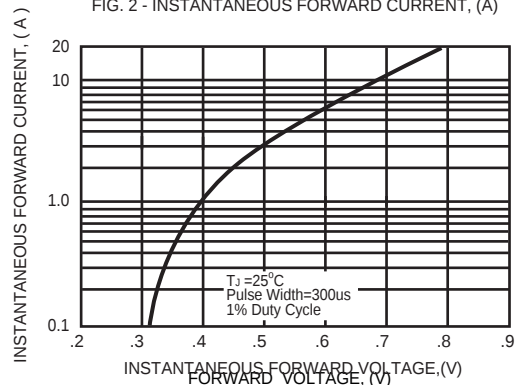


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

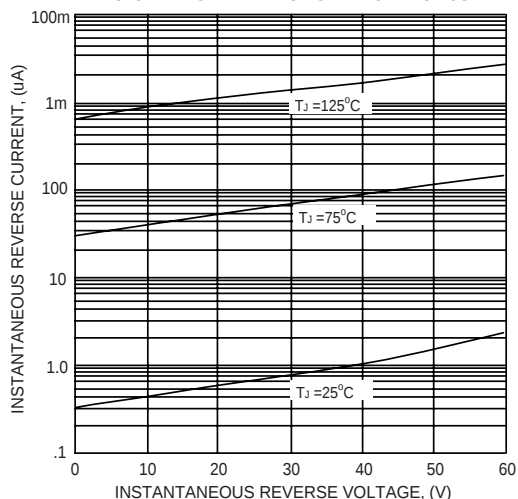


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

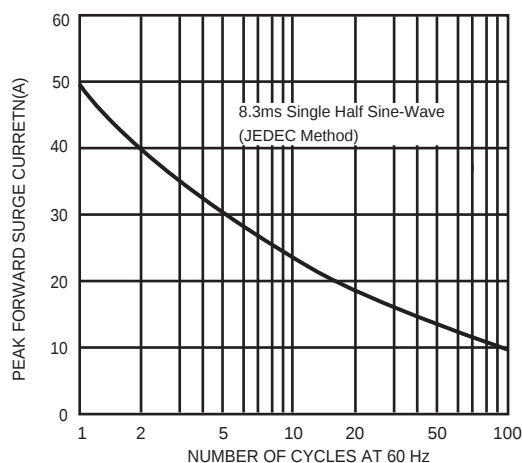


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

