



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

SURFACE MOUNT

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 40 Volts CURRENT 6.0 Amperes

MPL640ACTPT

PROVISIONAL SPEC.

APPLICATION

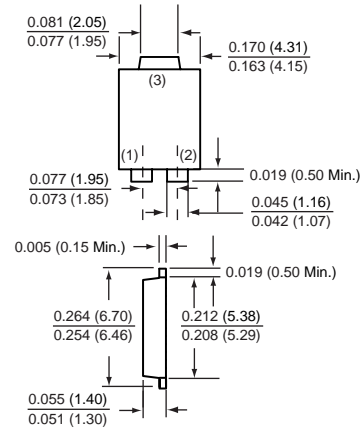
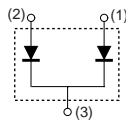
- * DC to DC Converters
- * Switch- Mode Power Supplies
- * Notebook PC

FEATURE

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

SMP

CIRCUIT



SMP

MAXIMUM RATINGS (At $T_A = 25^{\circ}C$ 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	$^{\circ}C / W$
Operating Temperature Range	T_J	-65 to +125	$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 to +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^{\circ}C$ 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) at Rated DC Blocking Voltage	@ $T_J = 25^{\circ}C$	10	μA
	@ $T_J = 100^{\circ}C$	20	mAmps

- NOTES : 1. Pulse test : 300 us 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

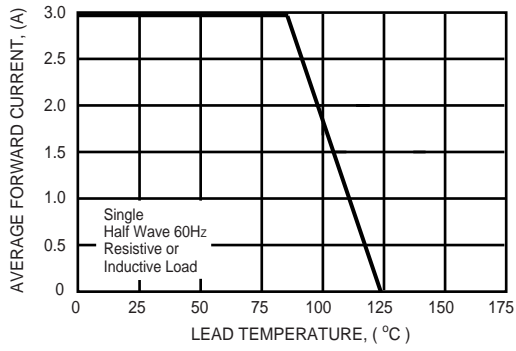


FIG. 2 - INSTANTANEOUS FORWARD CURRENT, (A)

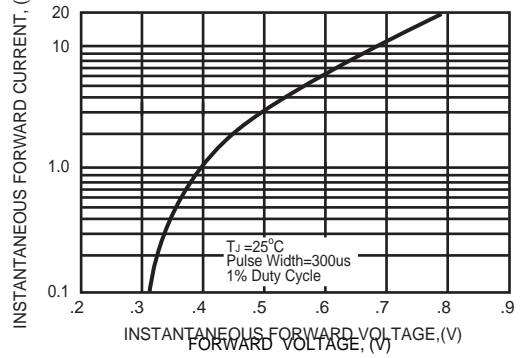


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

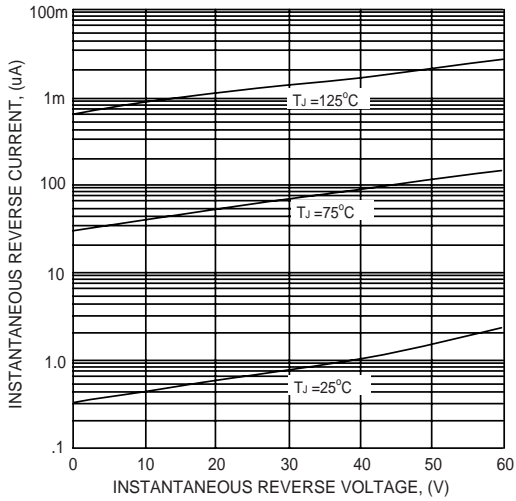


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

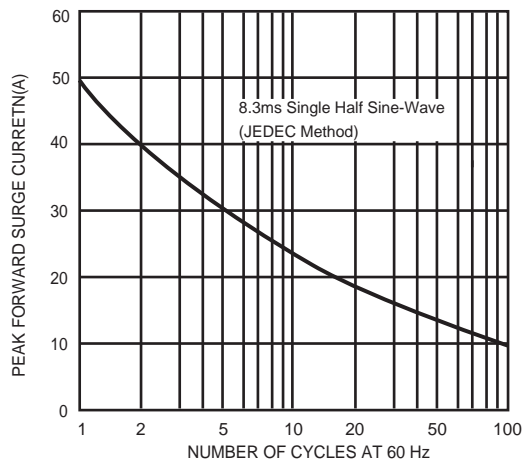


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

