CHENMKO ENTERPRISE CO.,LTD

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE 700 - 1000 Volts CURRENT 1.0 Ampere

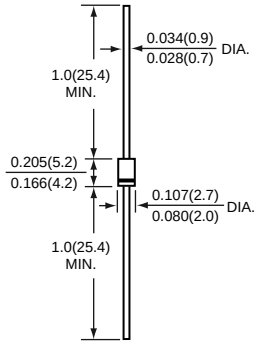
MUR170PT
THRU
MUR1100PT

Lead free devices

FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* Low power loss, high efficiency
* Low leakage
* High current capability
* High speed switching
* High current surge
* High reliability
* High temperature soldering guaranteed : 260°C/10 seconds at terminals

DO-41



Dimensions in inches and (millimeters)

DO-41

MECHANICAL DATA

Case: JEDEC DO-41 molded plastic
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Weight: 0.35 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	MUR170PT	MUR180PT	MUR190PT	MUR1100PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	700	800	900	1000	Volts
Maximum RMS Voltage	V_{RMS}	490	560	630	700	Volts
Maximum DC Blocking Voltage	V_{DC}	700	800	900	1000	Volts
Maximum Average Forward Rectified Current	I_O	1.0@T_A=90°C				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	35				Amps
Typical thermal resistance	$R_{\theta JA}$	52				°C / W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175				°C

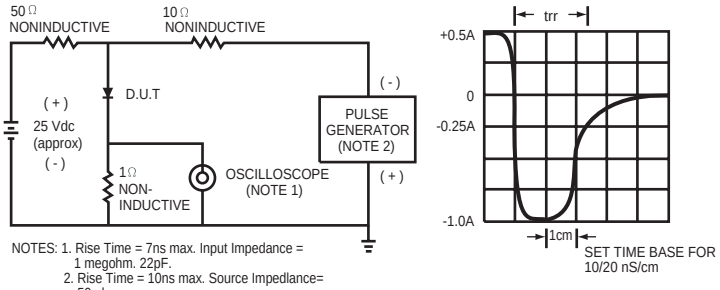
ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MUR170PT	MUR180PT	MUR190PT	MUR1100PT	UNITS
Maximum Instantaneous Forward Voltage at 1.0 A DC	V_F	1.75				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at T_J = 25°C	I_R	10				uAmps
Maximum Full Load Reverse Current Average, Full Cycle 0.375" (9.5mm) lead length at T_J = 150°C		600				uAmps
Maximum Reverse Recovery Time (Note)	trr	75				nSec

NOTES : Test Conditions : I_F = 0.5 A, I_R = -1.0 A, I_{RR} = -0.25 A

RATING CHARACTERISTIC CURVES (MUR170PT THRU MUR1100PT)

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



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

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

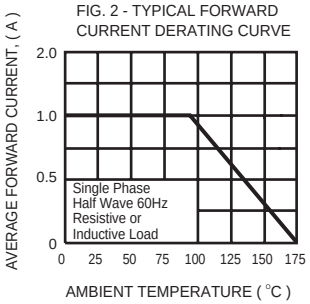


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

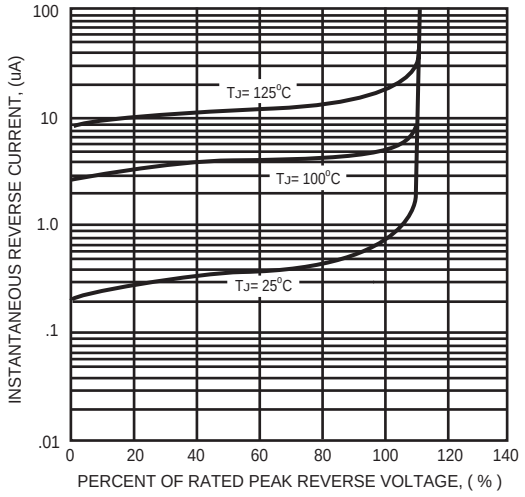


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

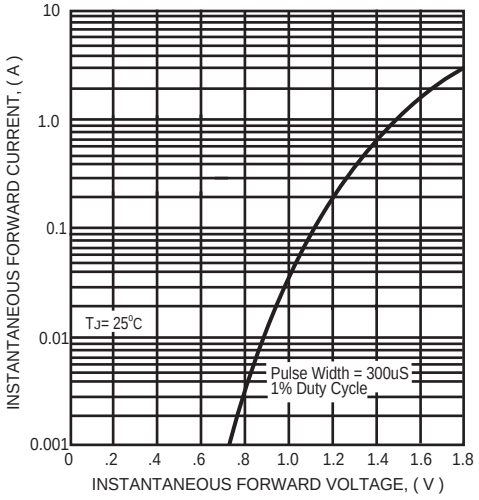


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

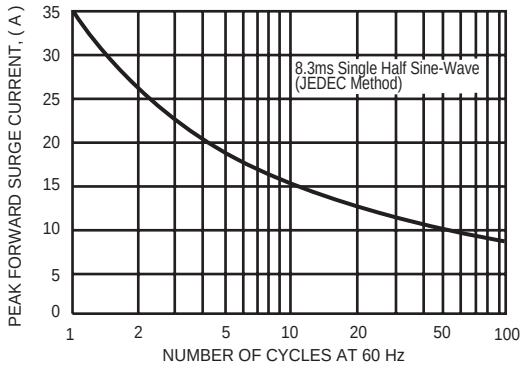


FIG. 6 - TYPICAL JUNCTION CAPACITANCE