CHENMKO ENTERPRISE CO.,LTD

GLASS PASSIVATED

FAST RECOVERY RECTIFIER

VOLTAGE RANGE 50 - 1000 Volts CURRENT 1.0 Ampere

FR101GPT

THRU

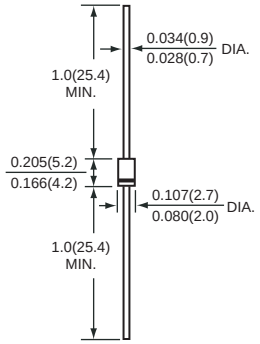
FR107GPT

Lead free devices

FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* High reliability
* Low leakage
* Low forward voltage drop
* High current capability
* High surge capability
* Fast switching
* Glass passivated junction

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: Color band denotes cathode end
Mounting Position: Any
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	FR101GPT	FR102GPT	FR103GPT	FR104GPT	FR105GPT	FR106GPT	FR107GPT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Current at T_A = 55°C	I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Typical Junction Capacitance (Note 1)	C_J	15							pF
Operating and Storage Temperature Range	$T_{J,STG}$	-65 to +175							°C

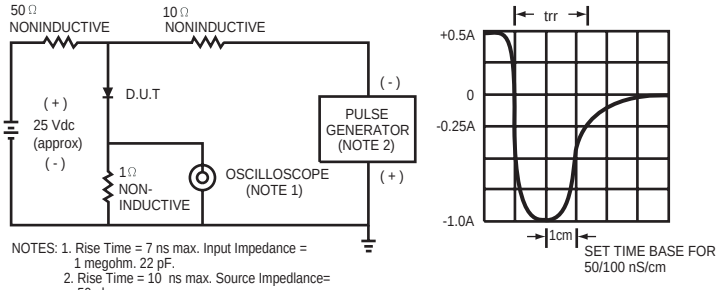
ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	FR101GPT	FR102GPT	FR103GPT	FR104GPT	FR105GPT	FR106GPT	FR107GPT	UNITS
Maximum Instantaneous Forward Voltage at 1.0 A DC	V_F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage at T_A = 25°C	I_R	5.0							uAmps
Maximum Full Load Reverse Current Average, Full Cycle 0.375" (9.5mm) lead length at T_L = 55°C		100							uAmps
Maximum Reverse Recovery Time (Note 2)	trr	150				250	500		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

RATING CHARACTERISTIC CURVES (FR101GPT THRU FR107GPT)

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 Impedlance= 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

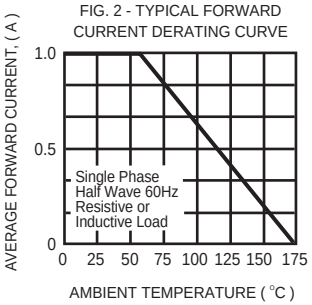


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

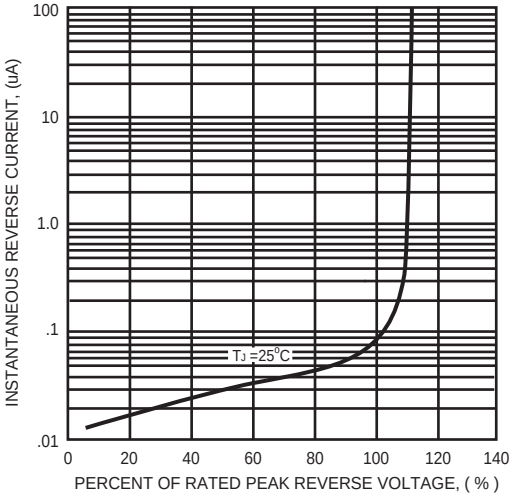


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

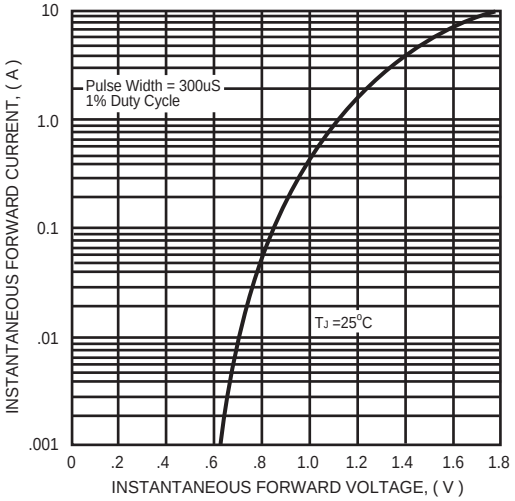


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

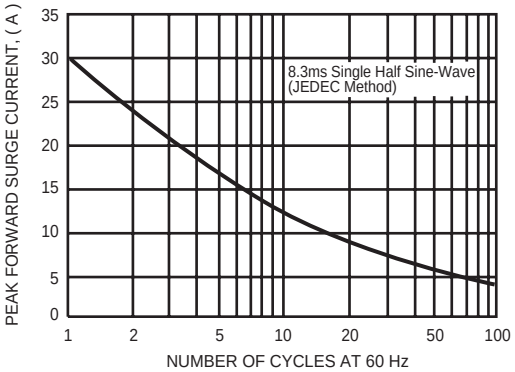


FIG. 6 - TYPICAL JUNCTION CAPACITANCE