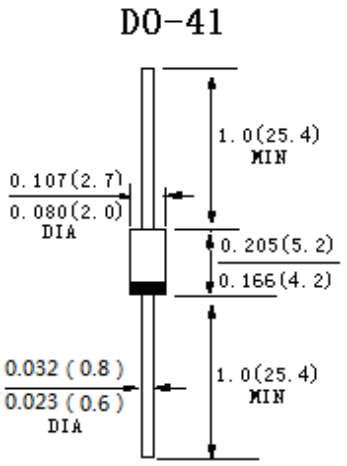
沂光集成

FAST RECOVERY RECTIFIER

FR101 THRU FR107

Features

- Low reverse leakage
- High forward surge capability
- High reliability
- High temperature soldering guaranteed:260℃/10seconds, 9.5mm lead length
- Lead and body according with RoHS standard



Dimensions in inches and (millimeters)

Mechanical Data

Case: DO-41 Molded plastic

Epoxy: UL 94V-0 rate flame retardant

Lead: Pure tin plated, lead free

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified

Single phase, half wave, 60 Hz, resistive or inductive load

For capacitive load, derate current by 20%

TYPE NUMBER		Symbols	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	Units
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 9.5mm lead length at T_A=55℃		$I_{F(AV)}$	1.0							A
Peak Forward Surge Current,8.3ms single half-wave superimposed on rated load(JEDEC method)		I_{FSM}	30							A
Maximum instantaneous forward voltage at1.0A		V_F	1.3							V
Maximum reverse recovery time(**Note:** 1)		T_{rr}	150				250	500		nS
Maximum DC reverse current at rated DC blocking voltage	Ta=25℃	I_{R1}	5.0							μA
	Ta=100℃	I_{R2}	50.0							μA
Operating junction temperature range		T_J	-55to+150							℃
Storage temperature range		T_{stg}	-55to+150							℃

Note: 1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.

Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

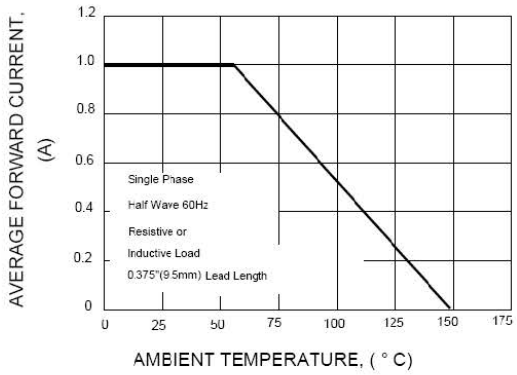


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

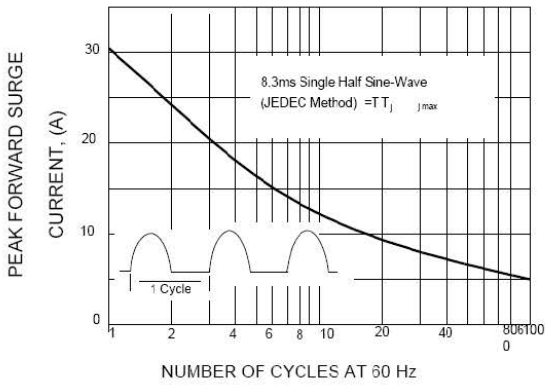


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

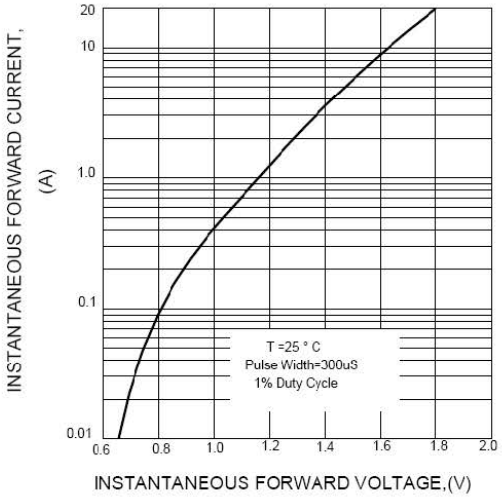


FIG.4-TYPICAL REVERSE CHARACTERISTICS

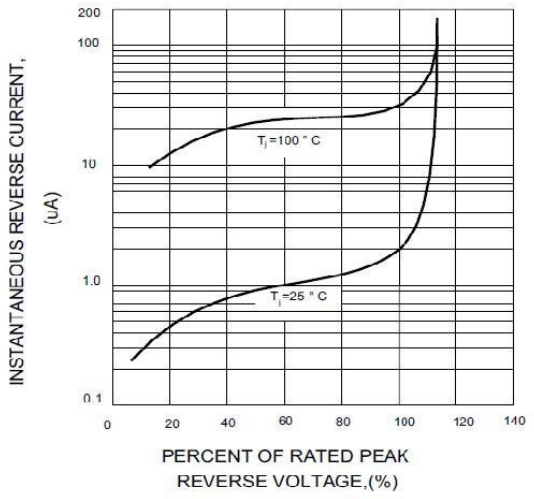


FIG.5-TYPICAL JUNCTION CAPACITANCE

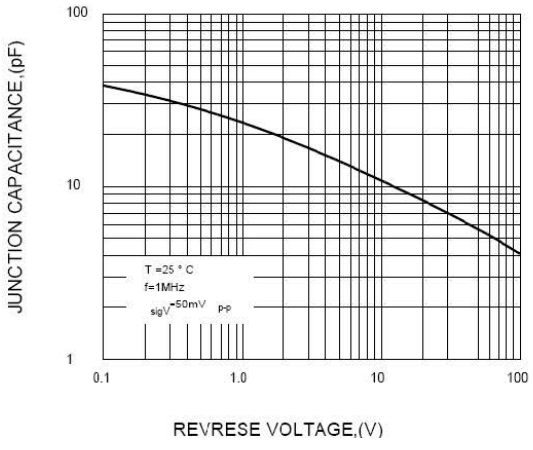
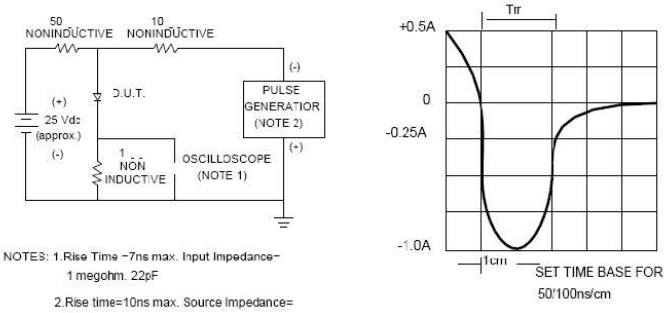


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm. 22pF

2.Rise time=10ns max. Source Impedance= 50 ohms