

Features

Low cost

Low leakage

solvents

Glass passivated junction

Low forward voltage drop

High current capability

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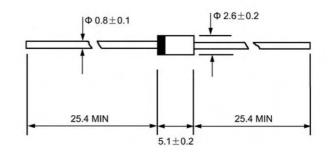
FR101-FR107

Glass Passivate Rectifiers



VOLTAGE RANGE: 50 --- 1000 V CURRENT: 1.0 A

DO - 41



Dimensions in millimeters

Case:JEDEC DO-41,molded plastic

 \diamondsuit Polarity: Color band denotes cathode

- ♦ Weight: 0.012 ounces,0.34 grams
- \diamond Mounting position: Any

Mechanical Data

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Easily cleaned with alcohol, lsopropanol and similar

The plastic material carries U/L recognition 94V-0

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		FR101	FR102	FR103	FR104	FR105	FR106	FR107	UNITS
Maximum recurrent 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 forw ard rectified current 9.5mm lead length, $@T_A = 75^{\circ}C$	I _{F(AV)}	1.0				A			
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T _J =125°C	I _{FSM}	30.0				A			
Maximum instantaneous forw ard voltage at 1.0A	$V_{\rm F}$	1.3					V		
Maximum reverse current $@T_A=25^{\circ}C$ at rated DC blocking voltage $@T_A=100^{\circ}C$	I _R	5.0 100.0				μA			
Maximum reverse recovery time (Note1)	t _{rr}	150		250	500		ns		
Typical junction capacitance (Note2)	CJ	12.0					pF		
Typical thermal resistance (Note3)	$R_{ extsf{ heta}JA}$	55.0					°C/W		
Operating junction temperature range	TJ	- 55 + 175			°C				
Storage temperature range	T _{STG}	- 55 +175			Ĉ				

NOTE: 1. Measured with I_F =0.5A, I_R =1A, I_m =0.25A.

2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

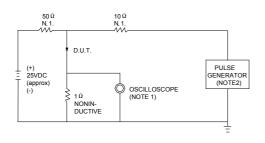


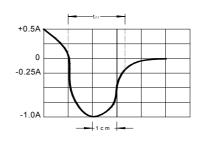
FR101-FR107 Glass Passivate Rectifiers

Ratings AND Charactieristic Curves

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

AMPERES

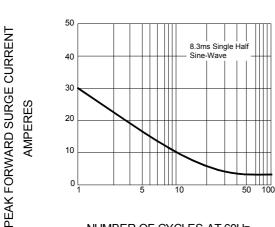




NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE =1M $_{\Omega}$. 22pF. 2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 $_{\Omega}$. SET TIME BASE FOR 50/100 ns/cm

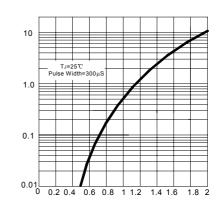
FIG.2 -- TYPICAL FORWARD CURRENT DERATING CURVE AVERAGE FORWARD RECTIFIED CURRENT 1.25 **INSTANTANEOUS FORWARD CURRENT** Single Phase Half Wave 60HZ 1.00 Resistive or Inductive Load 0.75 AMPERES 0.50 0.25 0 25 50 75 100 125 150 175 AMBIENT TEMPERATURE, °C

FIG.4 -- PEAK FORWARD SURGE CURRENT



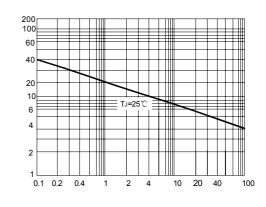
NUMBER OF CYCLES AT 60Hz

FIG.3 -- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.5 - TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG	
DO-41	5000/AMMO	50000	42X28X31	14.00	12.00	

JUNCTION CAPACITANCE, pF

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