

Fast Recovery Rectifier

Features

- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

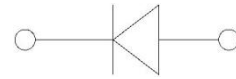


Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

Mechanical Data

- Package:DO-41
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity:Color band denotes cathode end



■ Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	FR15						
			1GS	2GS	3GS	4GS	5GS	6GS	7GS
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V _{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V _{DC}	V	50	100	200	400	600	800	1000
Average Forward Current @Half-sine wave, Resistance load, Tc(Fig.1)	I _o	A	1.5						
Forward Surge Current (Non-repetitive) @60HZ sine wave, 1 cycle, Ta=25°C	I _{FSM}	A	50						
Current squared time @1ms≤t≤8.3ms Ta=25°C, Rating of per diode	I ² t	A ² s	10.4						
Thermal Resistance(Typical) @Between junction and ambient	R _{θJ-A}	°C/W	58						
Thermal Resistance(Typical) @Between junction and lead	R _{θJ-L}	°C/W	11						
Thermal Resistance(Typical) @Between junction and case	R _{θJ-C}	°C/W	14						
Storage Temperature	T _{stg}	°C	-55 ~ +150						
Junction Temperature	T _j	°C	-55 ~ +150						

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	Symbol	Unit	Conditions	FR15						
				1GS	2GS	3GS	4GS	5GS	6GS	7GS
Peak Forward Voltage	V _{FM}	V	I _F = 1.5A	1.3						
Peak Reverse Current	I _{RRM}	μA	VR = V _{DC} @Ta=25°C	2.5						
			VR = V _{DC} @Ta=125°C	100						
Maximum reverse recovery time	T _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	150			250	500		

■ Characteristics (Typical)

FIG.1: I_o - T_a Curve

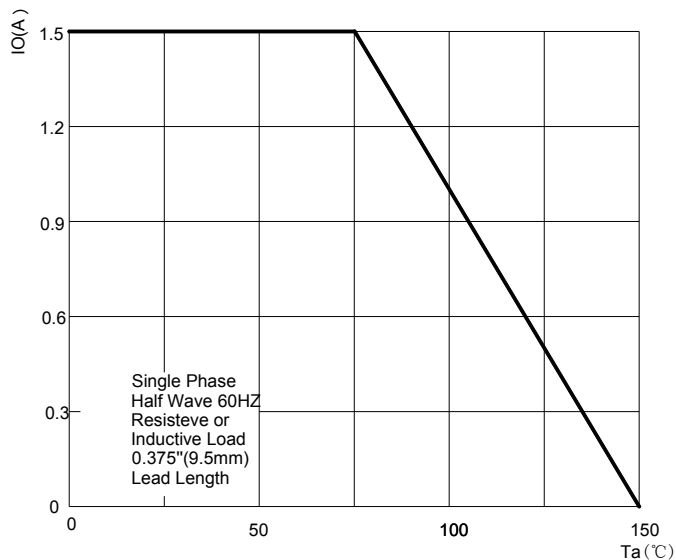


FIG.2: Forward Surge Current Capability

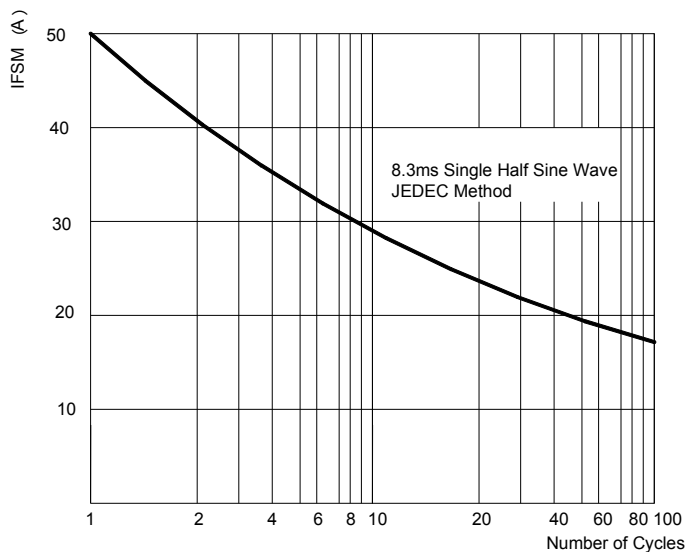


FIG.3: Forward Voltage

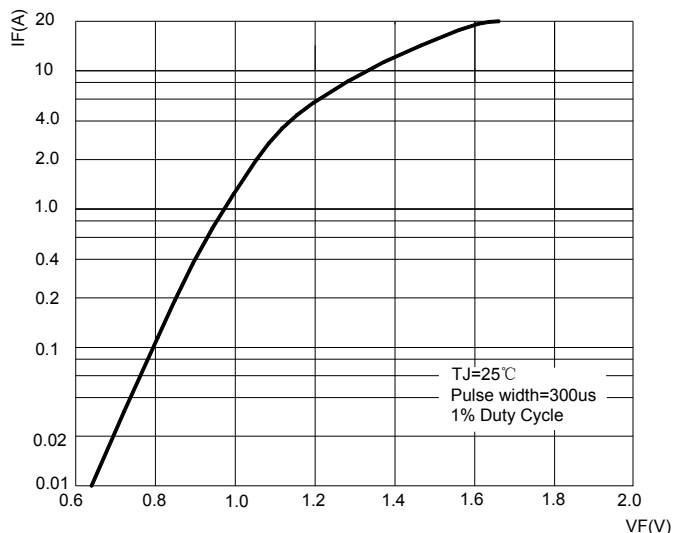


FIG.4: Typical Reverse Characteristics

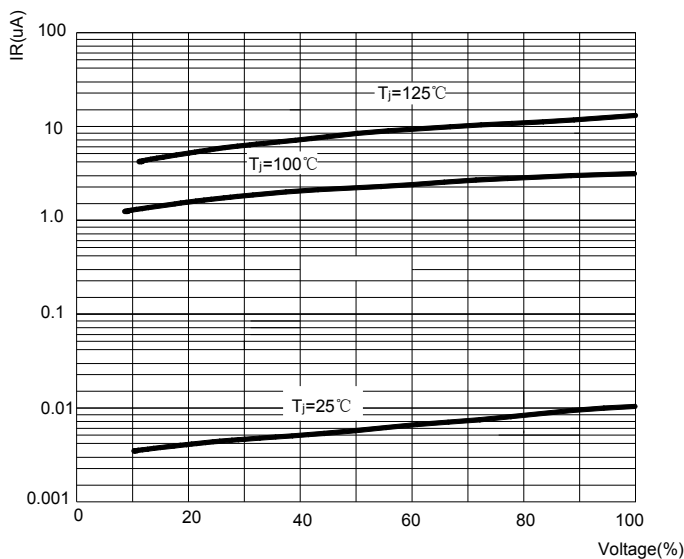
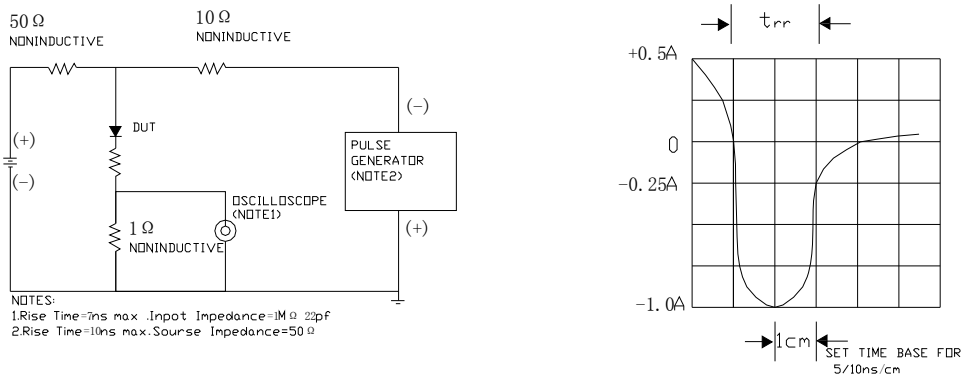


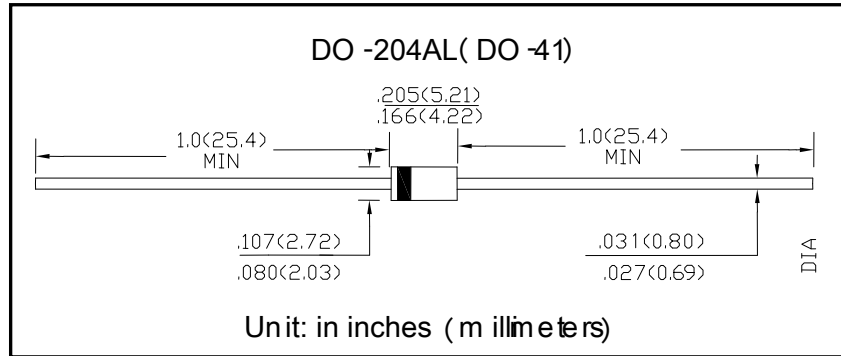
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Ordering Information (Example)

PREFERED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FR151GS THRU FR157GS	DO-41	5000	5000	50000	Ammo box

■ Outline Dimensions



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