

Glass Passivated Fast Recovery Rectifier
DO-15/DO-41

Features

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020
LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874


Primary characteristics

$I_{F(AV)}$	1.5A
V_{RRM}	50V to 1000V
I_{FSM}	50A
I_{RM}	5 μ A
V_{FM} at $I_F=1.5$ A	1.3V
T_J max.	150 °C

Applications

Ideal for ac-to-dc bridge full wave rectification such as SMPS, home appliances, office equipment, industrial automation applications

Mechanical data

- DO-15/DO-41
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque: 10cm \cdot kg(8.8 inches \cdot lbs)max.
- Recommended Torque: 5.7 cm \cdot kg(5 inches \cdot lbs)

Maximum rating (Ta=25°C unless otherwise noted)

Parameter	Sym	DO-15/DO-41							Unit	
		FR	FR	FR	FR	FR	FR	FR		
		151G	152G	153G	154G	155G	156G	157G		
Max. repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V	
Max. RMS reverse voltage	V_{RMS}	35	70	140	280	420	560	700	V	
Max. DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V	
Max. average forward current	$I_{F(AV)}$	1.5							A	
Non-repetitive peak forward surge current 8.3ms single half-sine-wave	I_{FSM}	50							A	
Max. instantaneous forward voltage drop per diode	V_{FM}	1.3 (1.5A)							V	
Max. instantaneous reverse current at rated DC blocking voltage	I_{RM}	Ta=25 °C	5							μ A
		Ta=125 °C	100							
Operating junction temperature	T_J	-55 ~ +150							°C	
Storage temperature	T_{STG}	-55 ~ +150							°C	
Maximum reverse recovery time (Note 1)	t_{rr}	150				250	500		nS	
Typical junction capacitance (Note 2)	C_J	25							pF	

Notes:

1 Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25$

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C



Ordering information (Example)

PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
FR157G				

Typical characteristics

FIG.3- TYPICAL FORWARD CHARACTERISTICS

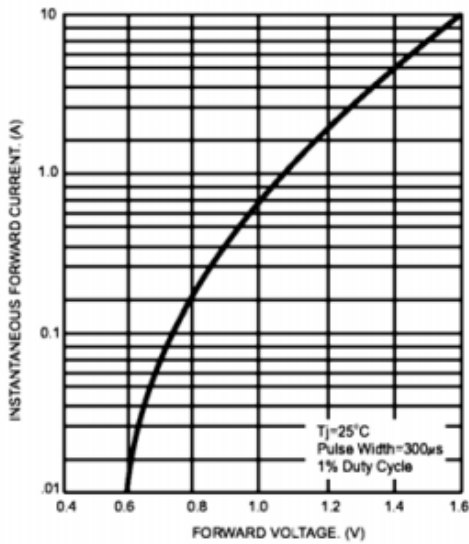


FIG.2- TYPICAL JUNCTION CAPACITANCE

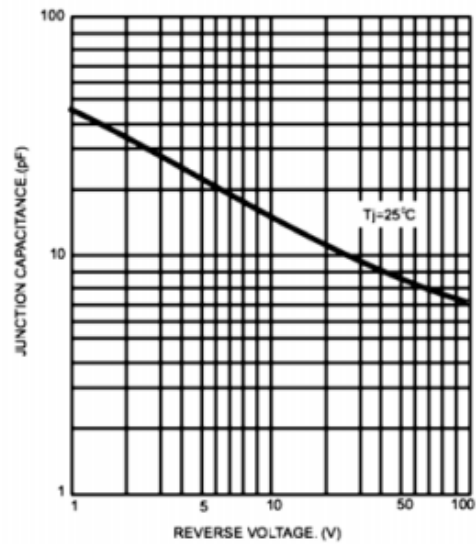


FIG.5- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

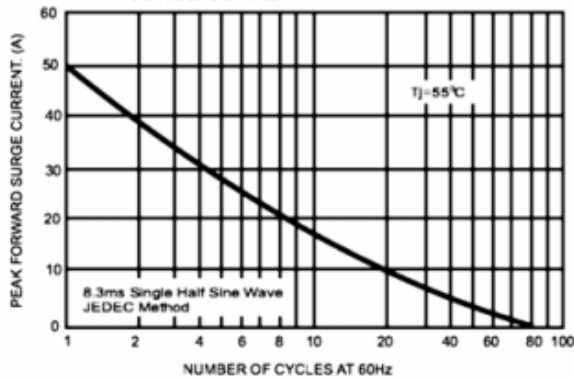
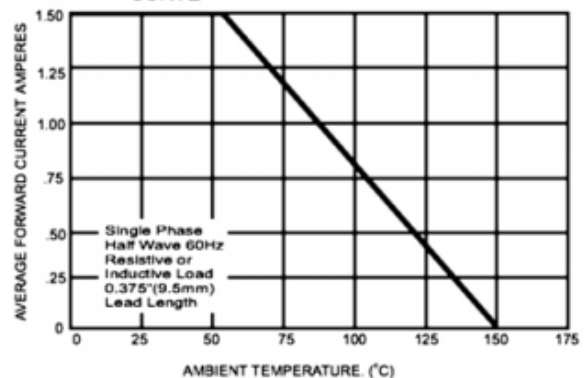
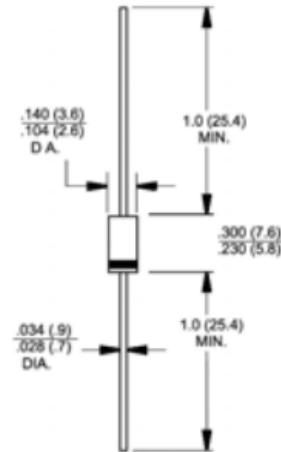


FIG.4- MAXIMUM FORWARD CURRENT DERATING CURVE

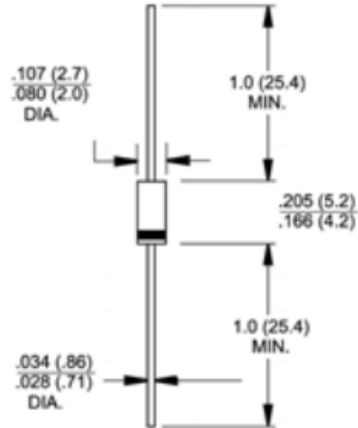


Package outline dimensions

DO-204AC (DO-15)



DO-204AL (DO-41)



Dimensions in inches and (millimeters) Dimensions in inches and (millimeters)

Note: Package is DO-204AL(DO-41) for part numbers from FR151LG thru FR157LG

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