

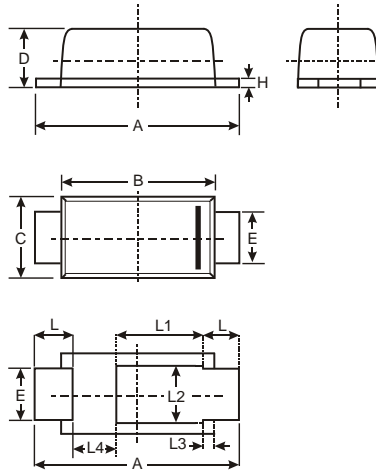
DFLR1200 / DFLR1400 / DFLR1600



1.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER
PowerDI[®] 123

Features

- Qualified to AEC-Q101 Standards for High Reliability
- Ideally Suited for Automated Assembly
- Green Molding Compound (No Br, Sb)
- Lead Free Finish, RoHS Compliant (Note 2)



PowerDI [®] 123			
Dim	Min	Max	Typ
A	3.50	3.90	3.70
B	2.60	3.00	2.80
C	1.63	1.93	1.78
D	0.93	1.00	0.98
E	0.85	1.25	1.00
H	0.15	0.25	0.20
L	0.45	0.85	0.65
L1	—	—	1.35
L2	—	—	1.10
L3	—	—	0.20
L4	0.90	1.30	1.05
All Dimensions in mm			

Mechanical Data

- Case: PowerDI[®] 123
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Band
- Terminals: Finish – Matte Tin annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 (E3)
- Marking & Type Code Information: See Last Page
- Ordering Information: See Last Page
- Weight: 0.01 grams (approximate)

Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	DFLR1200	DFLR1400	DFLR1600	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	200	400	600	V
Working Peak Reverse Voltage	V _{RWM}				
DC Blocking Voltage	V _R				
RMS Reverse Voltage	V _{R(RMS)}	140	280	420	V
Average Rectified Output Current (see figure 4)	I _O		1.0		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load	I _{FSM}		25		A
Forward Voltage @ I _F = 1.0A	V _{FM}		1.1		V
Peak Reverse Leakage Current @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 125°C	I _{RM}		3.0 100		mA
Typical Total Capacitance (f = 1MHz, V _R = 4.0VDC)	C _T		10		pF

Thermal Characteristics

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Ambient Air (Note 1)	R _{qJA}	134	¾	°C/W
Thermal Resistance, Junction to Soldering Point (Note 3)	R _{qJS}	¾	6	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	¾	-65 to +150	°C

- Notes: 1. Device mounted on 1" x 1", FR-4 PCB; 2 oz. Cu pad layout as shown on Diodes Inc. suggested pad layout document AP02001.pdf. T_A = 25°C
2. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.
3. Theoretical R_{qJS} calculated from the top center of the die straight down to the PCB/cathode tab solder junction.

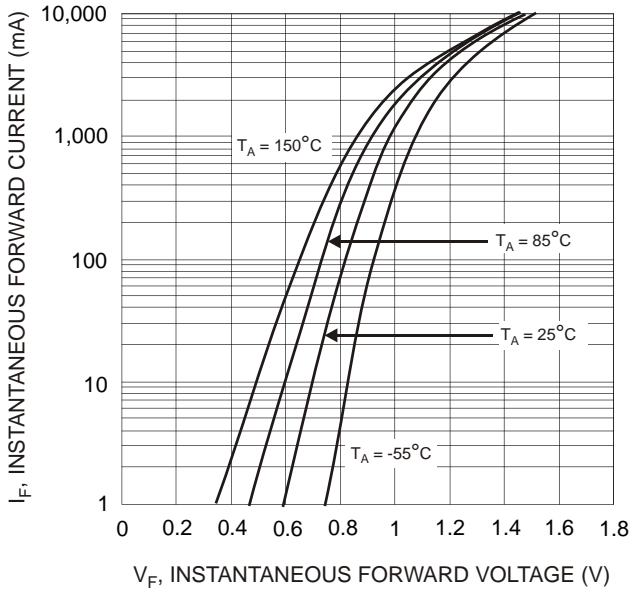


Fig. 1 Typical Forward Characteristics

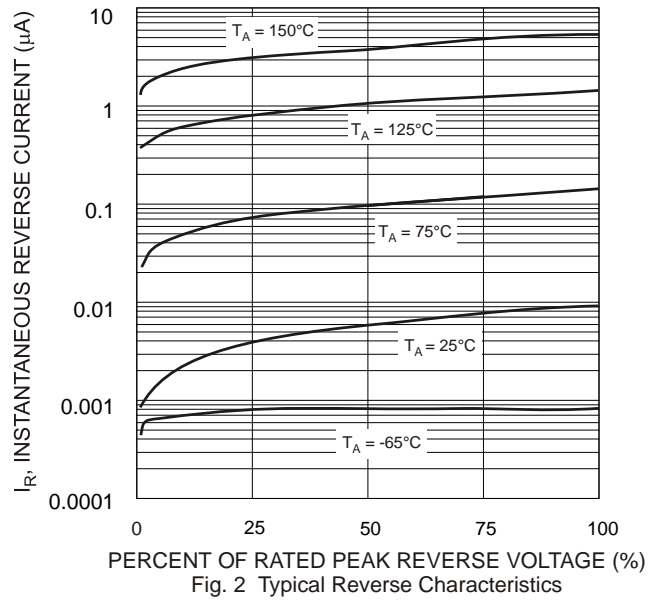


Fig. 2 Typical Reverse Characteristics

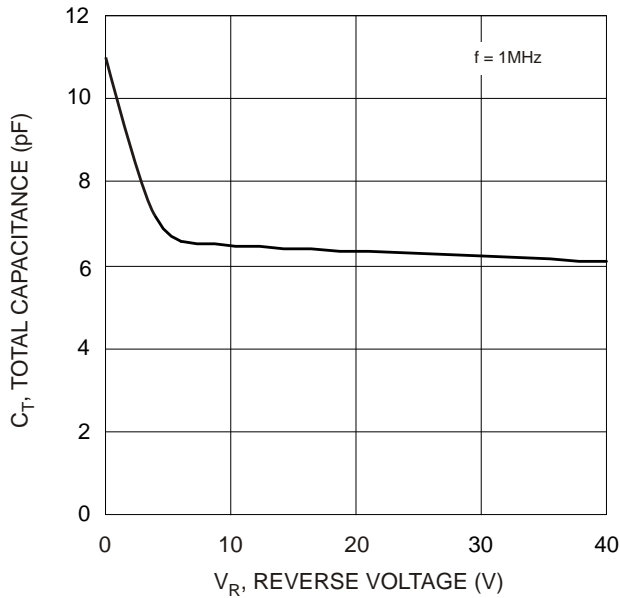


Fig. 3 Typical Total Capacitance

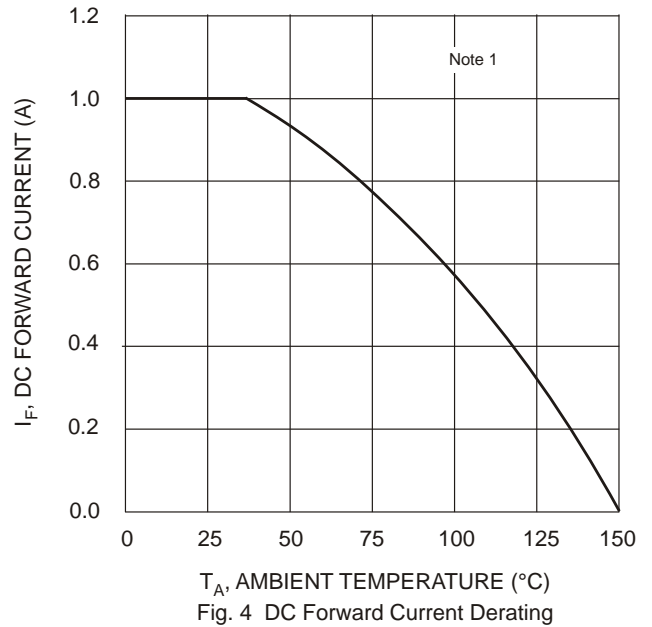


Fig. 4 DC Forward Current Derating

Ordering Information (Note 4)

Device	Marking Code	Packaging	Shipping
DFLR1200-7	F12	PowerDI [®] 123	3000/Tape & Reel
DFLR1400-7	F14	PowerDI [®] 123	3000/Tape & Reel
DFLR1600-7	F18	PowerDI [®] 123	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



Fxx = Product Type Marking Code (See Table Above)
 YM = Date Code Marking
 Y = Year (ex: S = 2005)
 M = Month (ex: 9 = September)

Date Code Key

Year	2005	2006	2007	2008	2009	2010	2011	2012
Code	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein. Diodes Incorporated does not convey any license under its patents, trademarks, or other intellectual property rights to any third party. The user of Diodes Incorporated products shall assume all risks of such use and agree to hold Diodes Incorporated and its subsidiaries harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.