



DFLR1200 / DFLR1400

1.0A SURFACE MOUNT GLASS PASSIVATED RECTIFIER PowerDI 123

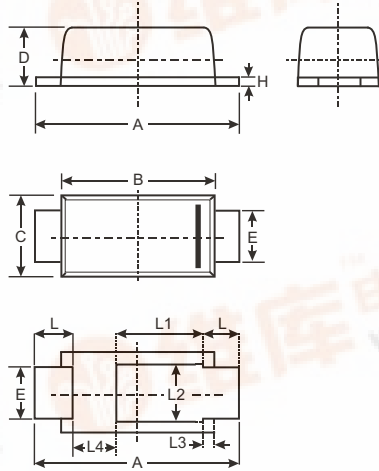
NEW PRODUCT

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)

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 (approx.)



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

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	Unit
Peak Repetitive Reverse Voltage	V _{RRM}			
Working Peak Reverse Voltage	V _{RWM}	200	400	V
DC Blocking Voltage	V _R			
RMS Reverse Voltage	V _{R(RMS)}	140	280	V
Average Rectified Output Current	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		A
Typical Total Capacitance (f = 1MHz, V _R = 4.0VDC)	C _T	10		pF
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150		C

Thermal Characteristics @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Ambient Air (Note 1)	R _{JA}	134		°C/W
Thermal Resistance, Junction to Soldering Point (Note 3)	R _{JS}		6	°C/W

- Notes:
- 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.
 - RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.
 - Theoretical R_{JS} calculated from the top center of the die straight down to the PCB/cathode tab solder junction.



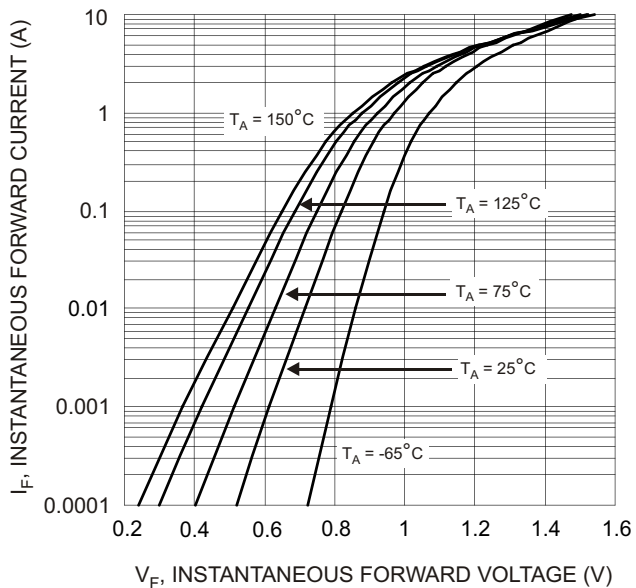


Fig. 1 Typical Forward Characteristics

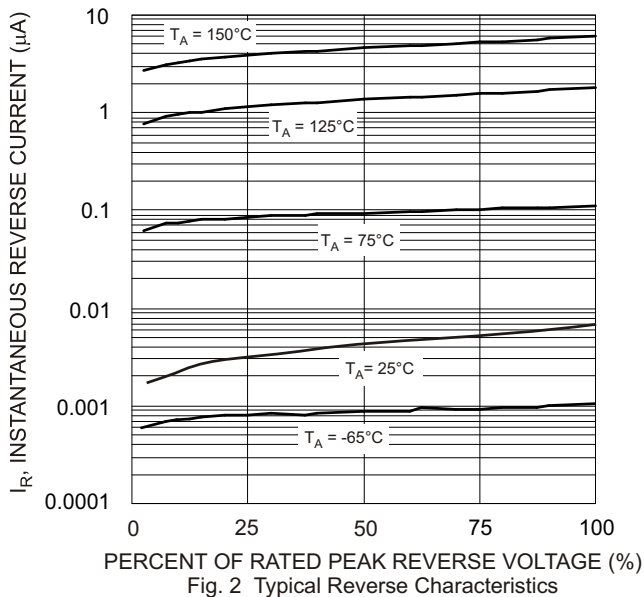


Fig. 2 Typical Reverse Characteristics

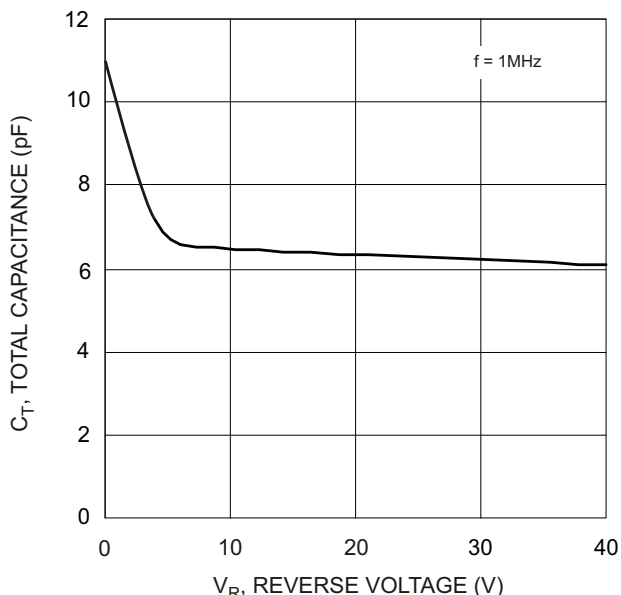


Fig. 3 Typical Total Capacitance

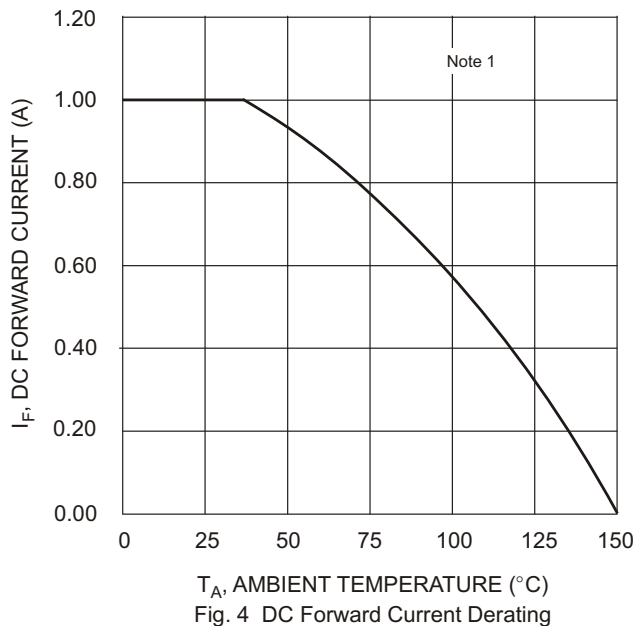


Fig. 4 DC Forward Current Derating

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

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
Code	S	T	U	V	W

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