

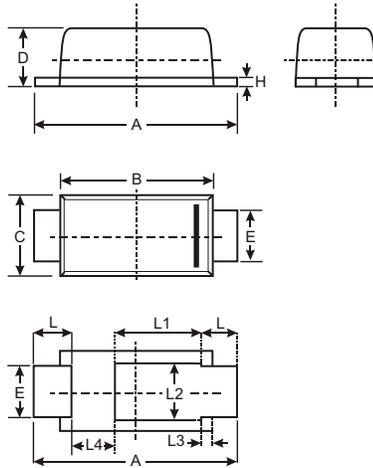
# DFLR1200 / DFLR1400 / DFLR1600



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 $T_A = 25\text{ C}$ unless otherwise specified

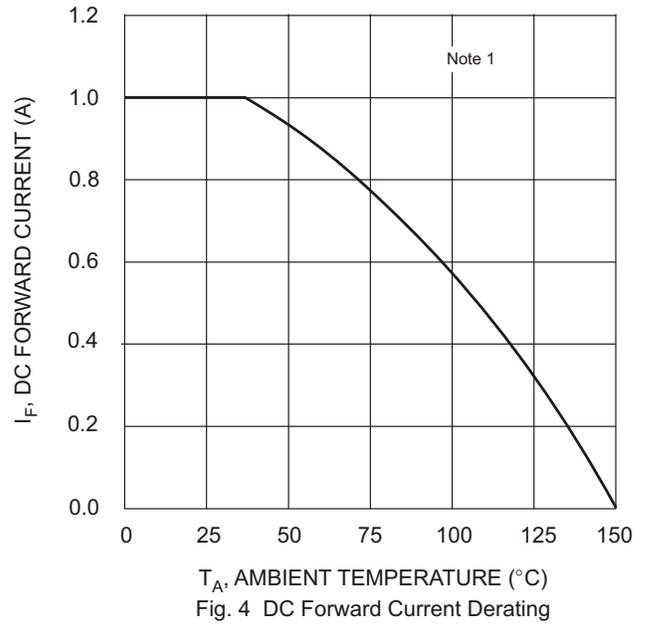
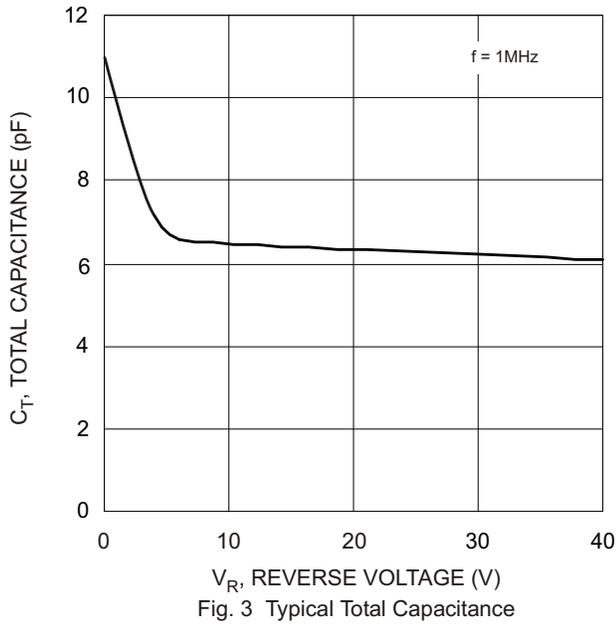
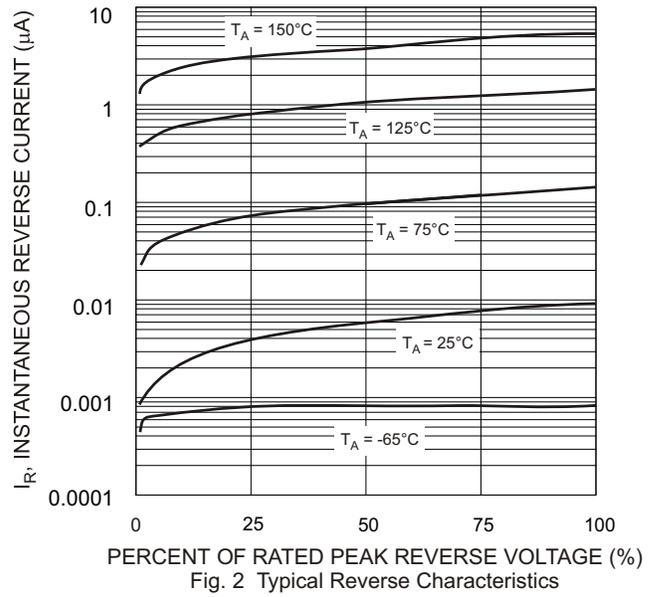
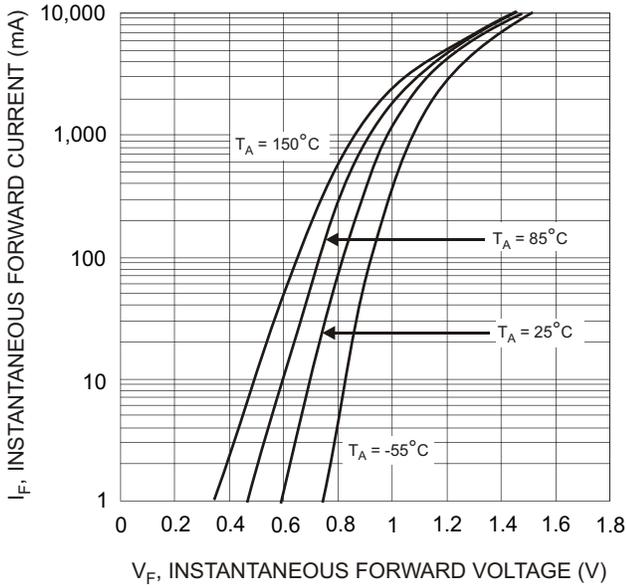
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

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 @ $T_A = 25\text{ C}$ at Rated DC Blocking Voltage @ $T_A = 125\text{ C}$	$I_{RM}$		3.0 100		A
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)	$R_{JA}$	134		$^{\circ}C/W$
Thermal Resistance, Junction to Soldering Point (Note 3)	$R_{JS}$		6	$^{\circ}C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$		-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.  $T_A = 25\text{ C}$   
2. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.  
3. Theoretical  $R_{JS}$  calculated from the top center of the die straight down to the PCB/cathode tab solder junction.



**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

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