

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)

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

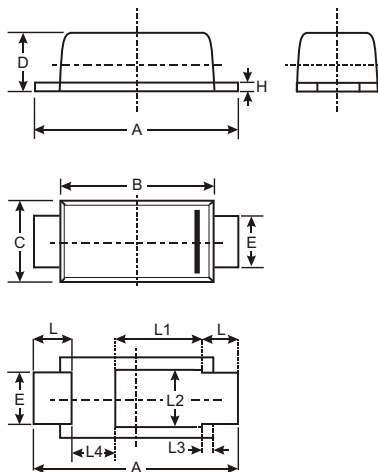
Terminal Connections: Cathode Band

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)



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

Single phase, half wave, 60Hz, resistive or inductive load.

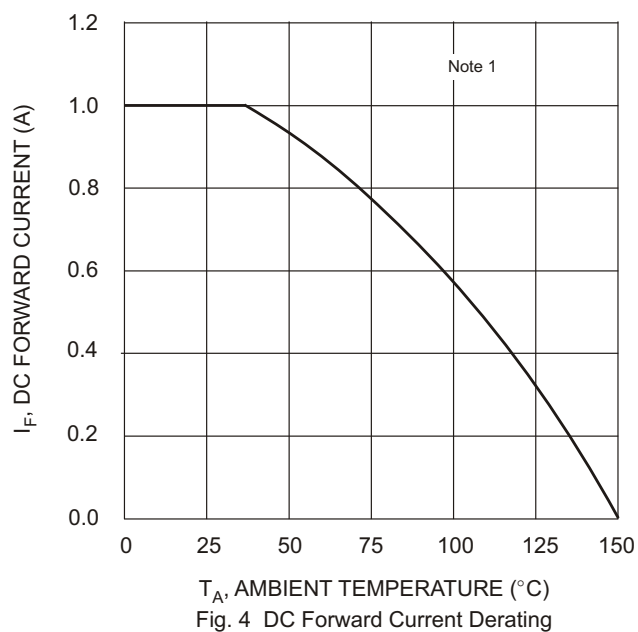
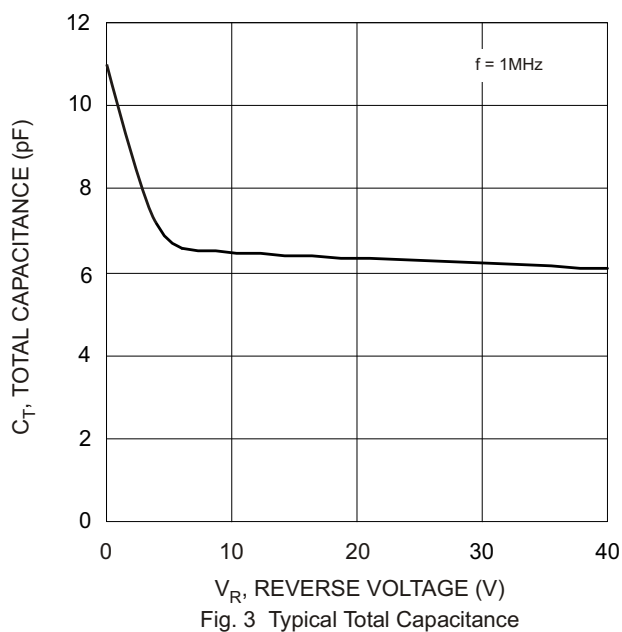
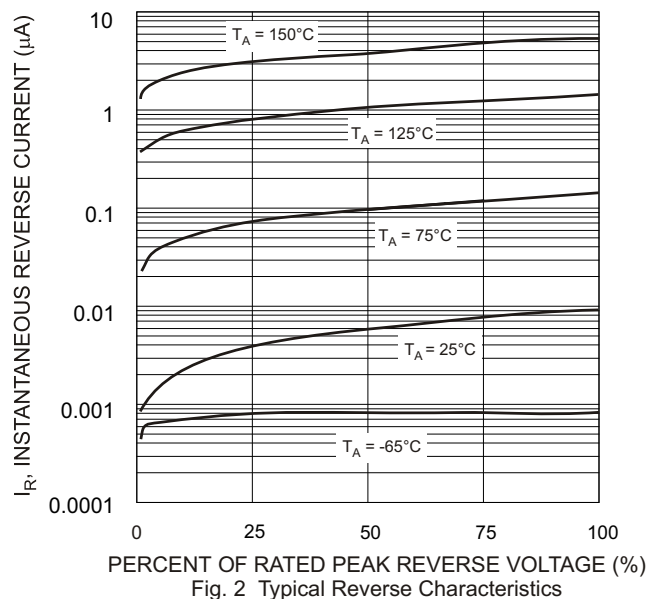
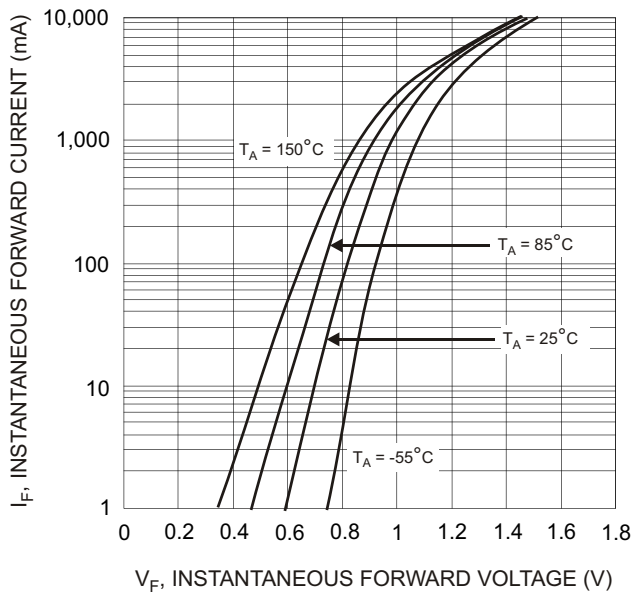
For capacitive load, derate current by 20%.

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 @ $I_F = 1.0\text{A}$	V_{FM}	1.1			V
Peak Reverse Leakage Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	I_{RM}	3.0 100			A
Typical Total Capacitance ($f = 1\text{MHz}$, $V_R = 4.0\text{VDC}$)	C_T	10			pF

Thermal Characteristics

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance, Junction to Ambient Air (Note 1)	R_{JA}	134		$^\circ\text{C/W}$
Thermal Resistance, Junction to Soldering Point (Note 3)	R_{JS}		6	$^\circ\text{C/W}$
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. $T_A = 25^\circ\text{C}$
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.

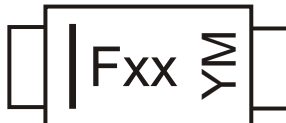


Ordering Information (Note 4)

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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