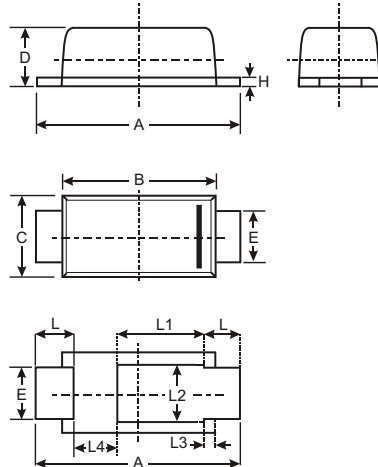


Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- Lead Free Finish, RoHS Compliant (Note 4)**
- "Green" Molding Compound (No Br, Sb)**
- Qualified to AEC-Q101 Standards for High Reliability**

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 @ 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	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	200	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	141	V
Average Forward Current	I _{F(AV)}	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	40	A
Operating Temperature Range	T _J	-65 to +175	°C
Storage Temperature Range	T _{STG}	-65 to +175	°C

Thermal Characteristics @ T_A = 25 °C unless otherwise specified

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance Junction to Ambient (Note 1)	R _{JA}	132		C/W
Thermal Resistance Junction to Soldering Point (Note 2)	R _{JS}		7	C/W

Electrical Characteristics @ T_A = 25 °C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	V _{(BR)R}	200			V	I _R = 8 A
Forward Voltage	V _F			0.85	V	I _F = 1.0A
Leakage Current (Note 3)	I _R			2	A	V _R = 200V, T _A = 25 °C
Total Capacitance	C _T		23		pF	V _R = 5VDC, f = 1MHz

- Notes:
- Part mounted on FR-4 board with 2 oz., minimum recommended copper pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 - Theoretical R_{JS} calculated from the top center of the die straight down to the PCB/cathode tab solder junction.
 - Short duration pulse test to minimize self-heating effect.
 - RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

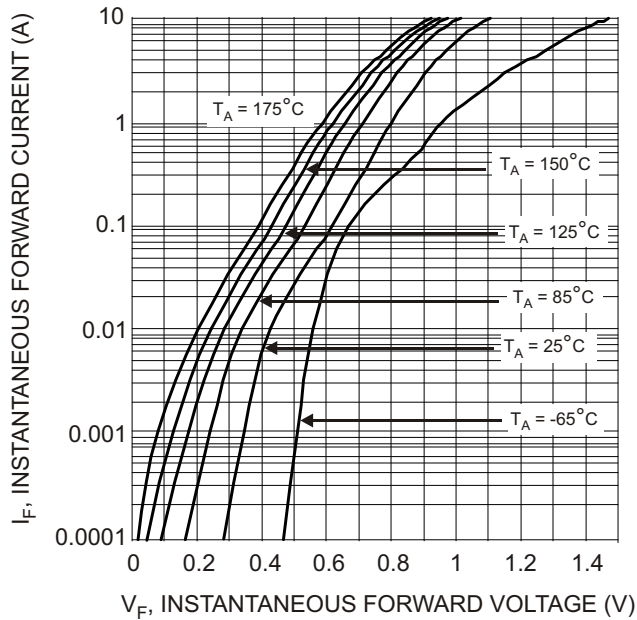


Fig. 1, Typical Forward Characteristics

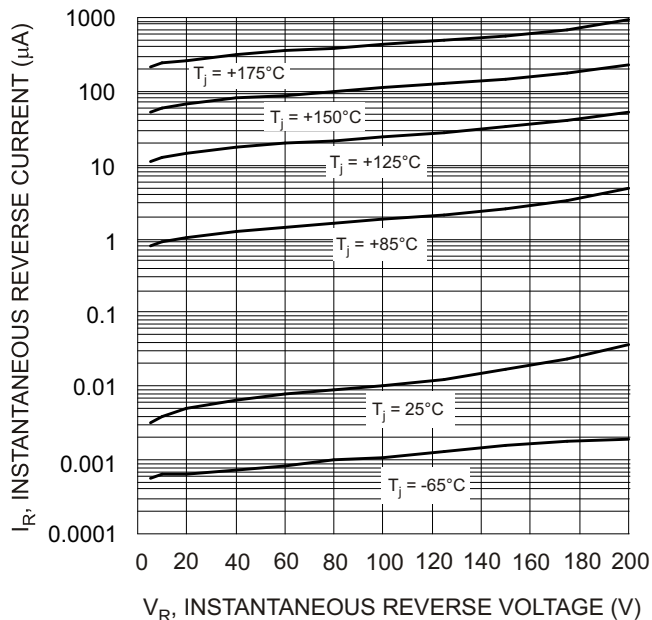


Fig. 2, Typical Reverse Characteristics

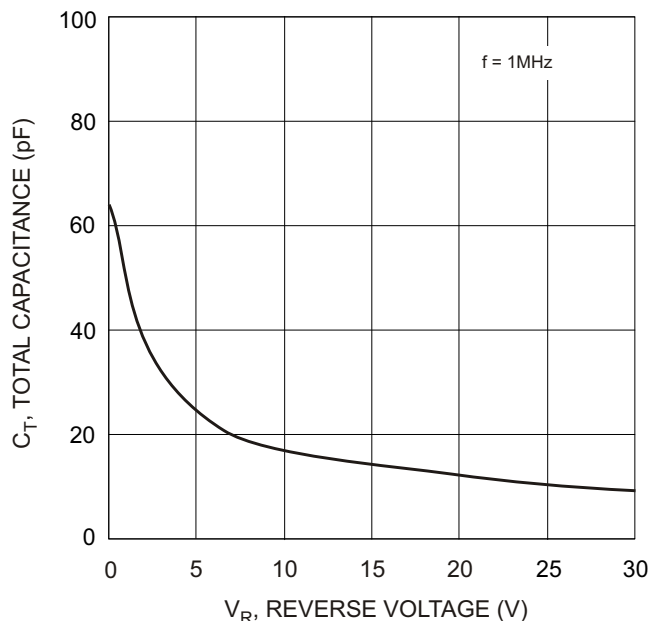


Fig. 3, Typical Total Capacitance vs. Reverse Voltage

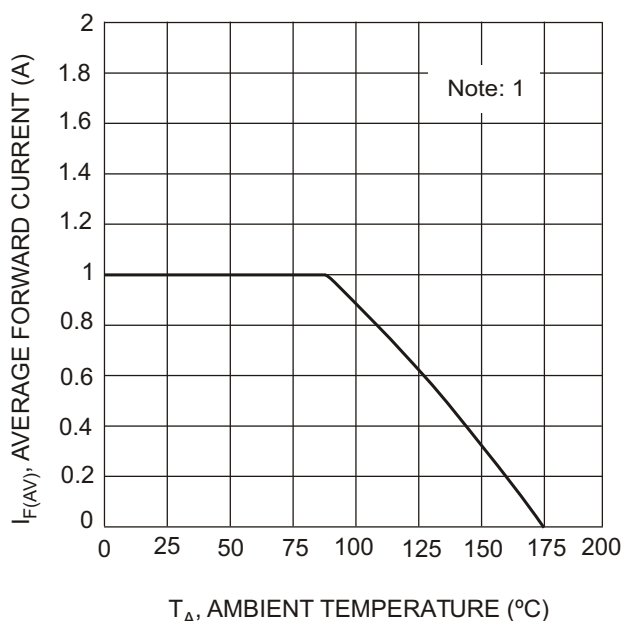


Fig. 4, Forward Current Derating Curve

Ordering Information (Note 5)

Device	Packaging	Shipping
DFLS1200-7	PowerDI 123	3000/Tape & Reel

Notes: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



F08 = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: R = 2004)
M = Month (ex: 9 = September)

Date Code Key

Year	2004	2005	2006	2007	2008	2009
Code	R	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