DFLS1200

1.0A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER

PowerDI®123

Please click here to visit our online spice models database.

Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- Patented Interlocking Clip Design for High Surge Current Capacity
- **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-020D
- Terminal Connections: Cathode Band
- Terminals: Finish – Matte Tin annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 e3
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.01 grams (approximate)

Top View

Maximum Ratings @T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
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

Thermal Characteristics

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	132	—	°C/W
Thermal Resistance Junction to Soldering Point (Note 2)	$R_{\theta JS}$	—	7	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175		°C

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 = 8μA
Forward Voltage	V_F	—	—	0.85	V	I_F = 1.0A
Leakage Current (Note 3)	I_R	—	—	2	μA	V_R = 200V, T_A = 25°C
Total Capacitance	C_T	—	23	—	pF	V_R = 5VDC, f = 1MHz

Notes:
1. 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. T_A = 25°C
2. Theoretical $R_{\theta JS}$ calculated from the top center of the die straight down to the PCB/cathode tab solder junction.
3. Short duration pulse test used to minimize self-heating effect.
4. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see *EU Directive 2002/95/EC Annex Notes.*

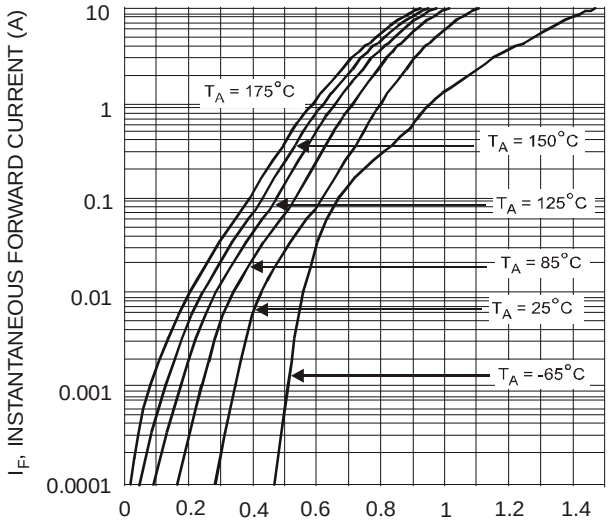


Fig. 1, Typical Forward Characteristics

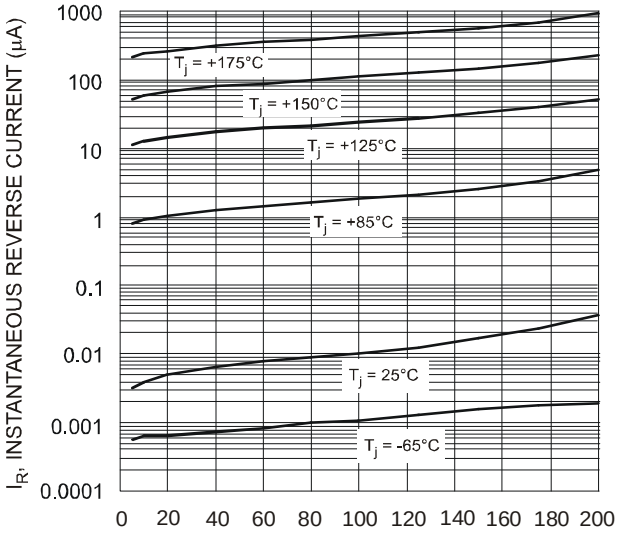


Fig. 2, Typical Reverse Characteristics

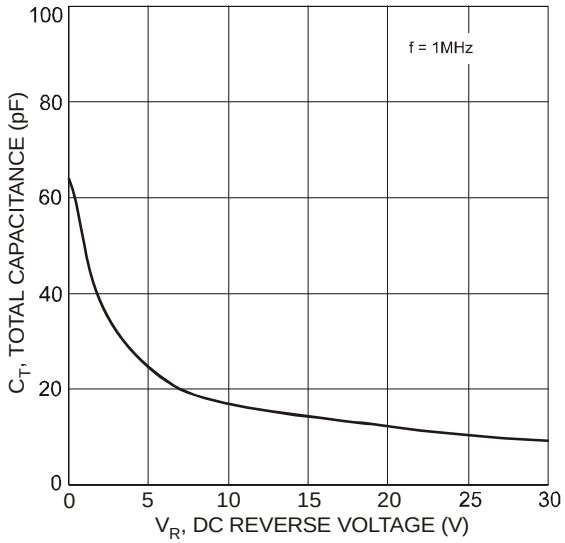


Fig. 3, Typical Total Capacitance vs. Reverse Voltage

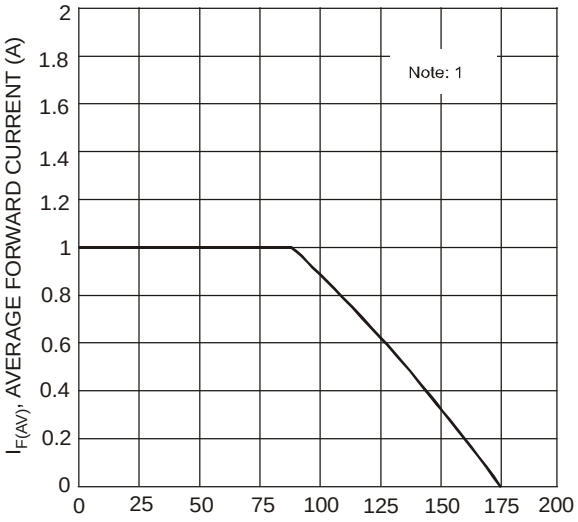


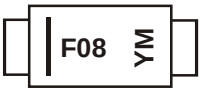
Fig. 4, Forward Current Derating Curve

Ordering Information (Note 5)

Part Number	Case	Packaging
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	2010	2011	2012
Code	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	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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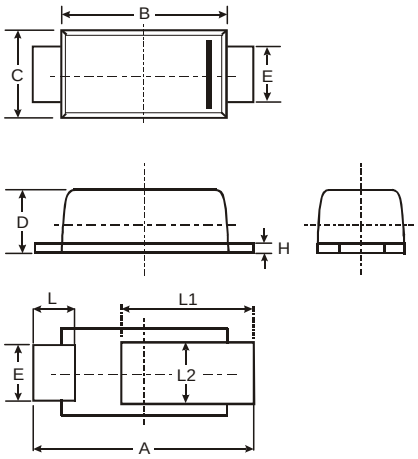
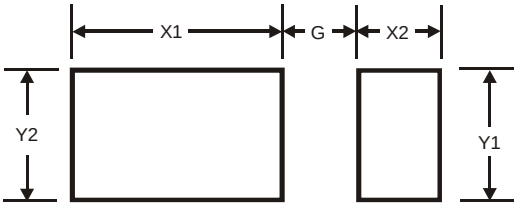
Package Outline Dimensions



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	0.55	0.75	0.65
L1	1.80	2.20	2.00
L2	0.95	1.25	1.10
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
G	1.0
X1	2.2
X2	0.9
Y1	1.4
Y2	1.4