

1.0A HIGH VOLTAGE SCHOTTKY BARRIER RECTIFIER

PowerDI[®]123

DFLS1200

Features

- Guard Ring Die Construction for Transient Protection ٠
- 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 $@T_A = 25^{\circ}C$ unless otherwise specified

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

Characteristic	Symbol	Value			
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	IFSM	40	A		

Thermal Characteristics

Characteristic	Symbol	Тур	Max	Unit		
Thermal Resistance Junction to Ambient (Note 1)	R _{θJA}	132		°C/W		
Thermal Resistance Junction to Soldering Point (Note 2)	R _{0JS}	_	7	°C/W		
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175				

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	V _{(BR)R}	200	_	_	V	$I_R = 8\mu A$
Forward Voltage	VF	_	_	0.85	V	I _F = 1.0A
Leakage Current (Note 3)	I _R	_		2	μΑ	$V_R = 200V, T_A = 25^{\circ}C$
Total Capacitance	CT		23		рF	$V_R = 5VDC, f = 1MHz$

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

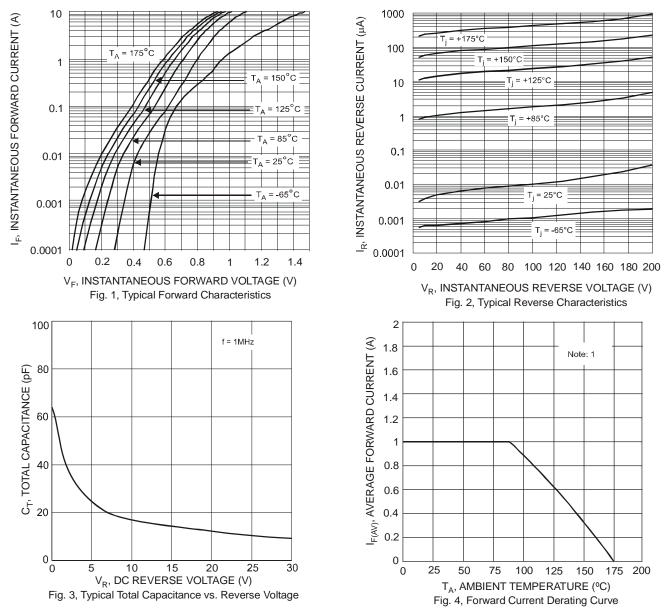
2. Theoretical R_{MJS} calculated from the top center of the die straight down to the PCB/cathode tab solder junction.

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.



DFLS1200



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	ΥM	

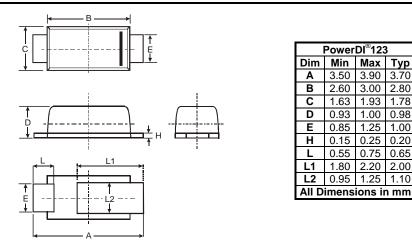
F08 = Product Type Marking Code YM = Date Code Marking Y = Year (ex: R = 2004) M = Month (ex: 9 = September)

Date Code Key												
Year	2004	20	005	2006	2007	20	08	2009	2010	20)11	2012
Code	R		S	Т	U	N	/	W	Х		Y	Z
Month	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D

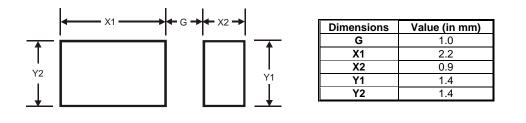
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Package Outline Dimensions



Suggested Pad Layout



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