



1.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER POWERDI® 123

Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- Patented Interlocking Clip Design for High Surge Current Capacity
- Qualified to AEC-Q101 Standards for High Reliability
- Lead Free Finish, RoHS Compliant (Note 1)
- Green Molding Compound (No Br, Sb)

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-020
- Terminal Connections: Cathode Band
- Terminals: Finish Matte Tin annealed over Copper leadframe. Solderable per MIL-STD-202 Method 208 63
- Weight: 0.01 grams (approximate)

POWERDI®123



Top View

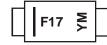
Ordering Information (Note 2)

Part Number	Case	Packaging
DFLS160-7	POWERDI [®] 123	3000/Tape & Reel

Notes:

- 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes
- 2. For packaging details, go to our website at http://www.diodes.com.

Marking Information



F17 = 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	2013	2014	2015	2016	2017
Code	R	S	Т	U	V	W	Х	Υ	Z	Α	В	С	D	E
Month	Jan	Feb	Ma	ar .	Apr	May	Jun	Jul	Aug	Se	p (Oct	Nov	Dec
Code	1	2	3	3	4	5	6	7	8	9	1	0	N	D



Maximum Ratings @TA = 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	60	٧
RMS Reverse Voltage	V _{R(RMS)}	42	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}	50	А

Thermal Characteristics

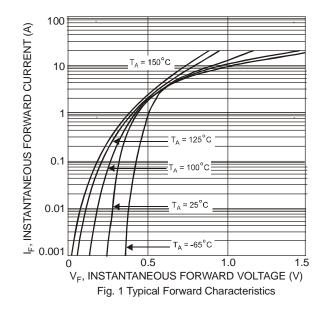
Characteristic	Symbol	Тур	Max	Unit
Thermal Resistance Junction to Soldering Point (Note 3)	$R_{\theta JS}$	_	6	°C/W
Thermal Resistance Junction to Ambient (Note 4)	$R_{\theta JA}$	125	_	°C/W
Typical Thermal Resistance (Note 7)	$R_{\theta JC}$	_	18	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to	+150	°C

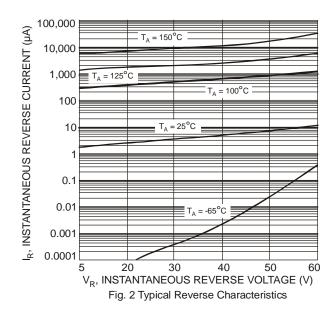
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	$V_{(BR)R}$	60	_		V	$I_R = 0.2mA$
Forward Voltage	V _F	_	_	0.50	V	I _F = 1.0A
Leakage Current (Note 5)	I_R	_	_	0.1	mA	$V_R = 60V, T_A = 25^{\circ}C$
Total Capacitance	C _T	_	67		pF	V _R = 10V, f = 1.0MHz

Notes:

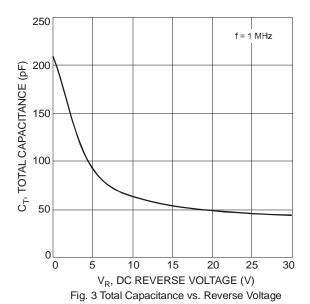
- 3. Theoretical R_{0JS} calculated from the top center of the die straight down to the PCB/cathode tab solder junction.
- 4. Device mounted on Polymide substrate, 1" x 1" 2oz copper double-sided PC board with minimum recommended pad layout, which can be found on our website at http://www.diodes.com.
- 5. Short duration pulse test to minimize self-heating effect
- 6. Part mounted on 50.8mm*50.8mm GETEK board with 25.4mm*25.4mm copper pad,25% anode,75% cathode. T_A = 25°C
- 7. Part mounted on FR-4 board with 1.8mm X 2.5mm cathode and 1.8mm X 1.2mm anode, 1 oz. copper pads. TA = 25°C

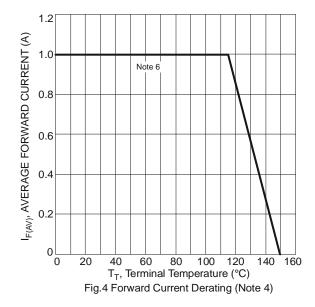




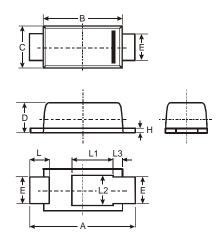
POWERDI is a registered trademark of Diodes Incorporated.





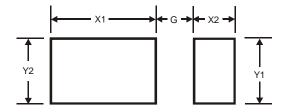


Package Outline Dimensions



POWERDI [®] 123							
Dim	Min	Max	Тур				
Α	3.50	3.90	3.70				
В	2.60	3.00	2.80				
C	1.63	1.93	1.78				
D	0.93	1.00	0.98				
Е	0.85	1.25	1.00				
H	0.15	0.25	0.20				
L	0.40	0.50	0.45				
L1	-	-	1.35				
L2	-	-	1.10				
L3	-	-	0.20				
All D	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



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многоканальный

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001 Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

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