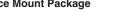




SURFACE MOUNT SCHOTTKY BARRIER DIODE PowerDI™323

Features

- Low Forward Voltage Drop
- Fast Switching
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Lead Free Finish/RoHS Compliant (Note 1)
- "Green" Molding Compound (No Br, Sb)
- Ultra-Small Surface Mount Package





- Case: PowerDI[™]323
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 @3
- Polarity: Cathode Band
- Marking: Date Code & Type Code, See Page 2
- Type Code: 36
- Weight: 0.005 grams (approximate)
- Ordering Information: See Page 3



BOTTOM VIEW

TOP VIEW

Maximum Ratings @ T_A = 25°C unless otherwise specified

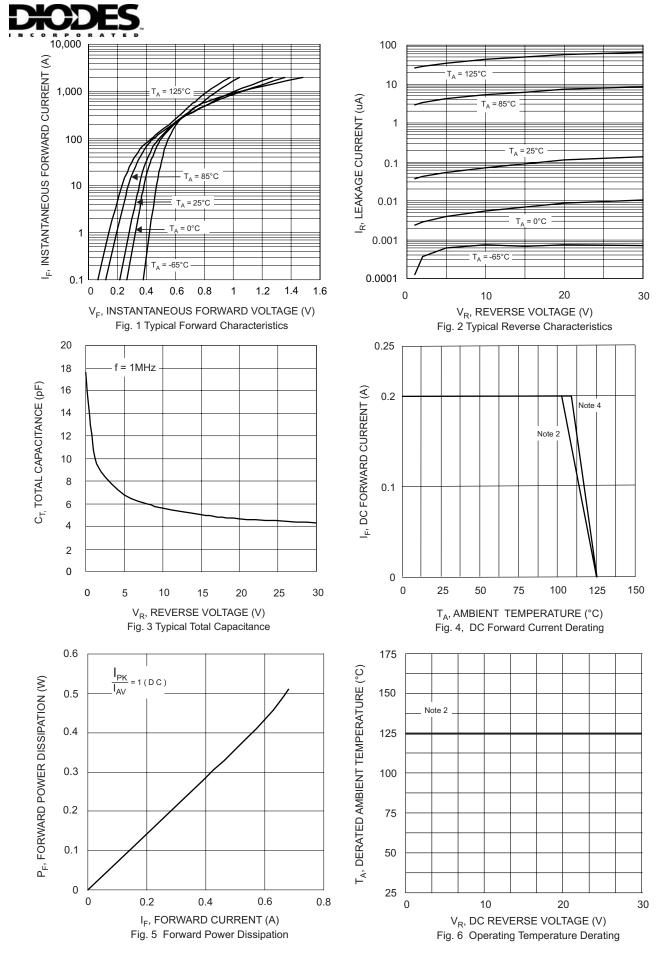
Characteristic	Symbol	Value	Unit		
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	V _{RWM} 30			
RMS Reverse Voltage	$V_{R(RMS)}$	21	V		
Continuous Forward Current	I _{FM}	200	mA		
Repetitive Peak Forward Current	I _{FRM}	300	mA		
Non-Repetitive Peak Forward Surge Current @ t _p < 10ms	I _{FSM}	600	mA		
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{ heta JA}$	242	°C/W		
Operating Temperature Range	Tj	-65 to +125	°C		
Storage Temperature Range	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 3)	V _{(BR)R}	30	_	_	V	I _{RS} = 100μA
Forward Voltage	V _F	_	217 280 350 400 485	240 320 400 500 800	mV	I _F = 0.1mA I _F = 1mA I _F = 10mA I _F = 30mA I _F = 100mA
Leakage Current (Note 3)	I _R	_	_	2.0	μА	V _R = 25V
Total Capacitance	Ст	_	10.7	_	pF	V _R = 1.0V, f = 1.0MHz
Reverse Recovery Time	t _{rr}	_	_	5.0	ns	I_F = 10mA through I_R = 10mA to I_R = 1.0mA, R_L = 100 Ω

Notes: 1. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

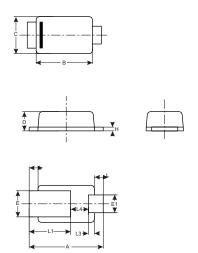
- Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. T_A = 25°C.
- 3. Short duration test pulse used to minimize self-heating effect.



Notes: 4. Polymide PCB, 2 oz. Copper, minimum recommended pad layout per http://www.diodes.com/datasheets/ap02001.pdf.

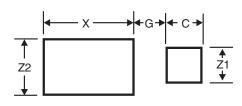


Package Outline Dimensions



PowerDI [™] 323									
Dim	Min	Max	Тур						
Α	2.40	2.60	2.50						
В	1.85	1.95	1.90						
С	1.20	1.20 1.30 1							
D	0.60	0.70	0.65						
E	0.78	0.98	0.88						
E1	0.50	0.70	0.60						
Н	0.08	0.18	0.13						
L	0.20	0 0.40 0.							
L1		_	1.40						
L3	_	_	0.20						
L4	0.40	0.80	0.60						
All	All Dimensions in mm								

Suggested Pad Layout



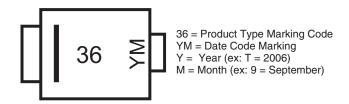
Dimensions	Value (in mm)
Z 1	0.8
Z2	1.1
G	0.5
Χ	2.0
С	0.8

Ordering Information (Note 5)

Device	Packaging	Shipping		
PD3S0230-7	Power DI™323	3,000/Tape & Reel		

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

Marking Information



Date Code Key

Year	2006 2007		2008			2009						
Code		Т		U			V			W		
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D



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