



DLPT05

SURFACE MOUNT DATALINE PROTECTION DEVICE

Features

- 300 Watts Peak Pulse Power (tp = 8x20µs)
- Transient Protection for data line to IEC61000-4-2 level 4 (ESD), 8kV HBM
 - Contact: Discharge $\pm 30 \text{kV}$
 - Air: Discharge ± 30 kV
- IEC 61000-4-4 (EFT)
- Low Leakage Current
- Surface Mount Package Ideally Suited for Automated Insertion
- Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 4 and 5)

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Terminal Connections: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.008 grams (approximate)
 GROUND



Top View

LINE TO V_{CC} BE PROTECTED

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power (tp = 8x20µs)	Ррк	300	W
Peak Forward Voltage (I _{PP} = 1A, tp = 8x20μs)	V _{FP}	2.1	V
Diode Peak Repetitive Reverse Voltage	V _{RRM}	75	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	417	°C/W
Operating and Storage Temperature Range	TJ, T _{STG}	-55 to +150	٥°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Reverse Standoff Voltage	Breakdow V _{BR}	n Voltage @ I _T	Test Current	Max. Reverse Leakage @ V _{RWM}	Max. Clamping Voltage @ I _{pp} = 1A (Note 3)	Max. Peak Pulse Current (Note 2)	Typical Total Capacitance		
V _{RWM} (V)	Min (V)	Max (V)	I _T (mA)	I _R (μΑ)	V _C (V)	(A)	(pF)		
5	6.0	_	1.0	20	9.8	17	1.9		

Notes: 1. $V_R = 0V$, f = 1MHz from line to be protected to ground pin.

2. tp = 8x20µs.

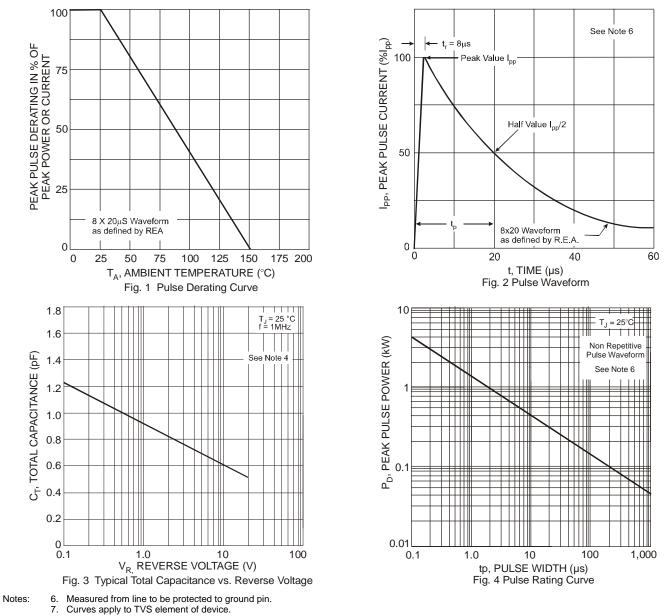
3. Clamping voltage value is based on an 8x20µs peak pulse current (Ipp) waveform.

4. No purposefully added lead. Halogen and Antimony Free.

 Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.





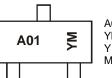


Ordering Information (Note 8)

Part Number	Case	Packaging
DLPT05-7-F	SOT-23	3000/Tape & Reel

Notes: 8. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



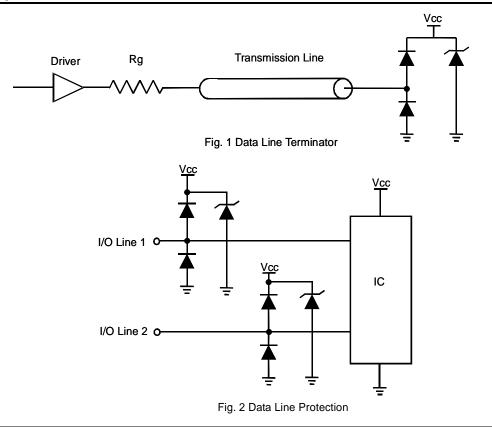
A01 = Product Type Marking Code YM = Date Code Marking Y = Year (ex: N = 2002)

M = Month (ex: 9 = September)

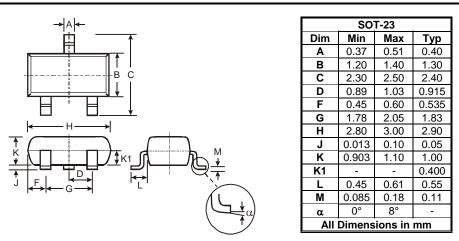
Date Code Key	-			-	-		-	-		-	-	-	-	-				
Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Code	J	K	L	М	Ν	Р	R	S	Т	U	V	W	Х	Y	Z	А	В	С
Month	Jan	1	Feb	Mar	•	Apr	Мау	'	Jun	Jul		Aug	Sep		Oct	Nov	,	Dec
Code	1		2	3		4	5		6	7		8	9		0	N		D



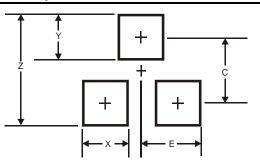
Typical Application Schematics



Package Outline Dimensions



Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.9
Х	0.8
Y	0.9
С	2.0
E	1.35



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