



DLPT05

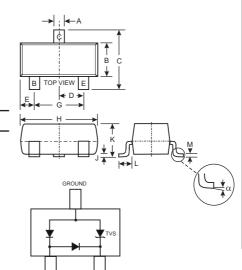
SURFACE MOUNT DATALINE PROTECTION DEVICE

Features

- 300 Watts Peak Pulse Power (tp = 8x20μs)
- Transient Protection for data line to IEC61000-4-2 level 4 (ESD), 8kV HBM, and IEC 61000-4-4 (EFT)
- Low Leakage Current
- Surface Mount Package Ideally Suited for Automatic Insertion
- Lead Free/RoHS Compliant (Note 4)

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Terminal Connections: See Diagram
- Part Marking (See Page 3): A01
- Ordering & Date Code Information: Page 3
- Weight: 0.008 grams (approximate)



SOT-23							
Dim	Min	Max					
Α	0.37	0.51					
В	1.20	1.40					
С	2.30	2.50					
D	0.89	1.03					
E	0.45	0.60					
G	1.78	2.05					
Н	2.80	3.00					
J	0.013	0.10					
K	0.903	1.10					
L	0.45	0.61					
M	0.085	0.180					
α	0°	8°					
All Dimensions in mm							

Maximum Ratings, Total Device @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit		
Peak Pulse Power (tp = 8x20μs)	P _{PK}	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 Resistance, Junction to Ambient	R ₀ JA	417	°C/W		
Operating and Storage Temperature Range	T _j , T _{STG}	-55 to +150	°C		

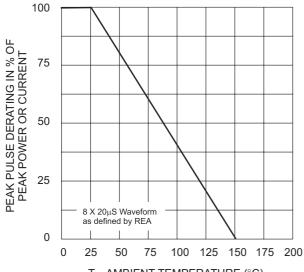
Electrical Characteristics, TVS Element @ TA = 25°C unless otherwise specified

Reverse Standoff Voltage	Breakdown Voltage Test Current		Max. Reverse Leakage @ V _{RWM}		Max. Peak Pulse Current (Note 2)	Typical Total Capacitance (Note 1)	
V _{RWM} (V)	Min (V)	Max (V)	I _T (mA)	I _R (μ A)	V _C (V)	(A)	(pF)
5	6	_	1.0	20	9.8	17	1.9

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

- 2. $tp = 8x20 \mu s$.
- 3. Clamping voltage values are based on an 8x20μs peak pulse current (Ipp) waveform.
- 4. No purposefully added lead.





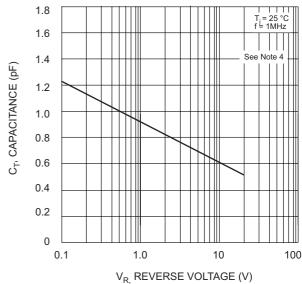
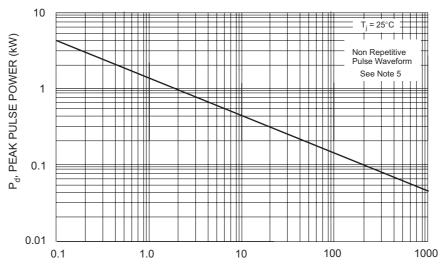
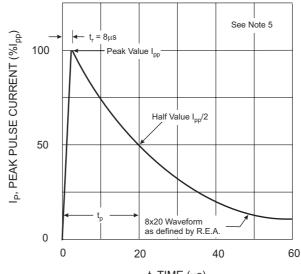


Fig. 2 Typical Total Capacitance vs Reverse Voltage





 t_{p} PULSE WIDTH (μ s) Fig. 3 Pulse Rating Curve



t, TIME (μs) Fig. 4 Pulse Waveform

Notes: 5. Measured from line to be protected to ground pin.

6. Curves apply to TVS element of device.

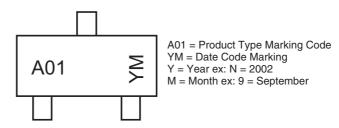


Ordering Information (Note 7)

Device	Packaging	Shipping		
DLPT05-7-F	SOT-23	3000/Tape & Reel		

Notes: 7. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

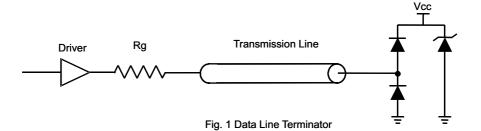
Marking Information



Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	J	K	L	М	N	Р	R	S	Т	U	V	W
Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Typical Application Schematics



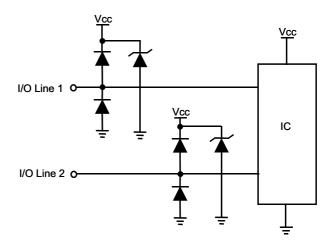


Fig. 2 Data Line Protection



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