



# DLPT05

## SURFACE MOUNT DATALINE PROTECTION DEVICE

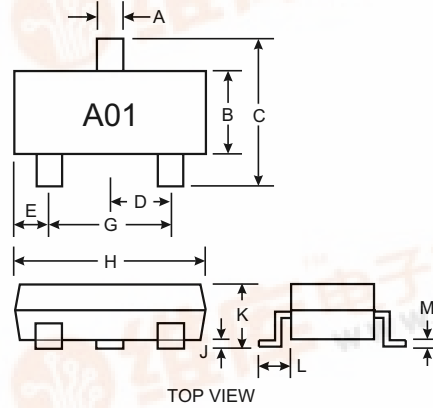
NEW PRODUCT

### Features

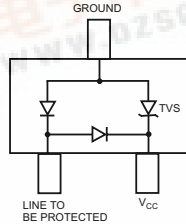
- 300 Watts Peak Pulse Power ( $t_p = 8 \times 20 \mu s$ )
- Transient Protection for data line to IEC61000-4-2 level 4 (ESD) and IEC 61000-4-4 (EFT)
- Low Leakage Current
- Surface Mount Package Ideally Suited for Automatic Insertion

### Mechanical Data

- Case: SOT-23, Molded Plastic
- Case Material: UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Terminal Connections: See Diagram



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
G	1.78	2.05
H	2.65	3.05
J	0.013	0.15
K	0.89	1.10
L	0.45	0.61
M	0.076	0.178
All Dimensions in mm		



### Maximum Ratings, Total Device @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power ( $t_p=8 \times 20 \mu s$ )	$P_{PK}$	300	W
Peak Forward Voltage ( $I_{PP}=1A, t_p=8 \times 20 \mu s$ )	$V_{FP}$	2.1	V
Diode Peak Repetitive Reverse Voltage	$V_{RRM}$	75	V
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ C$

### Electrical Characteristics, TVS Element @ $T_A = 25^\circ C$ unless otherwise specified

Reverse Standoff Voltage	Breakdown Voltage $V_{BR}$ @ $I_T$		Test Current	Max. Reverse Leakage @ $V_{RWM}$	Max. Clamping Voltage @ $I_{PP} = 1A$ (Note 3)	Max. Peak Pulse Current (Note 2)	Typical Junction Capacitance (Note 1)
	$V_{RWM}$ (V)	Min (V)					
5	6	—	1.0	20	9.8	17	140

- Notes:
1.  $V_R = V_{RWM}, f = 1MHz$  from  $V_{CC}$  to ground pin.
  2.  $t_p = 8 \times 20 \mu s$ .
  3. Clamping voltage values are based on an  $8 \times 20 \mu s$  peak pulse current ( $I_{PP}$ ) waveform.



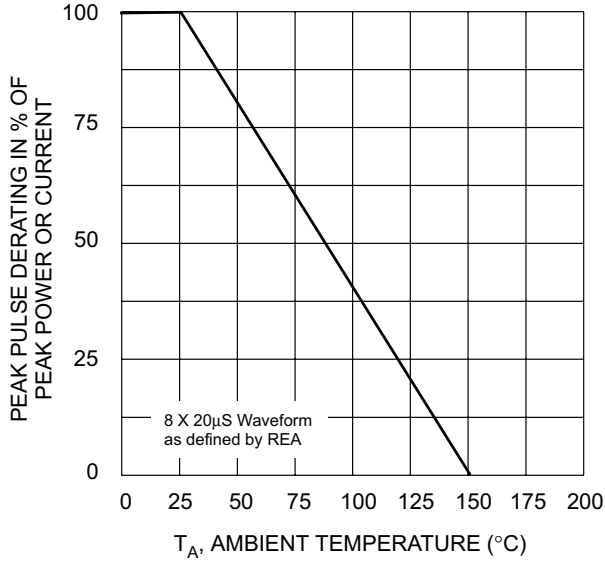


Fig. 1 Pulse Derating Curve

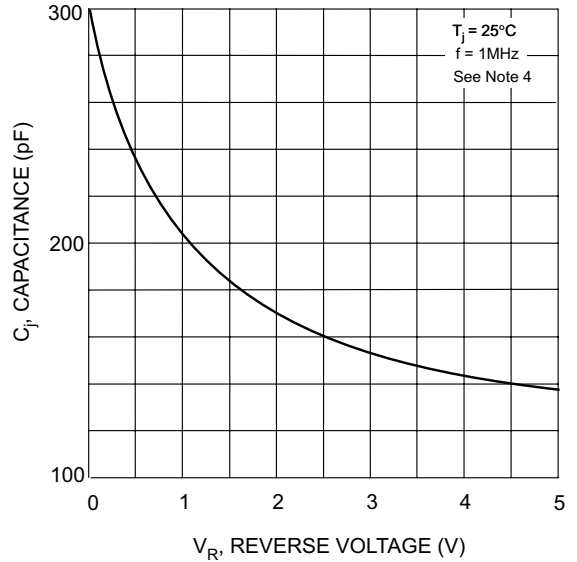


Fig. 2 Typ. Junction Capacitance vs Reverse Voltage

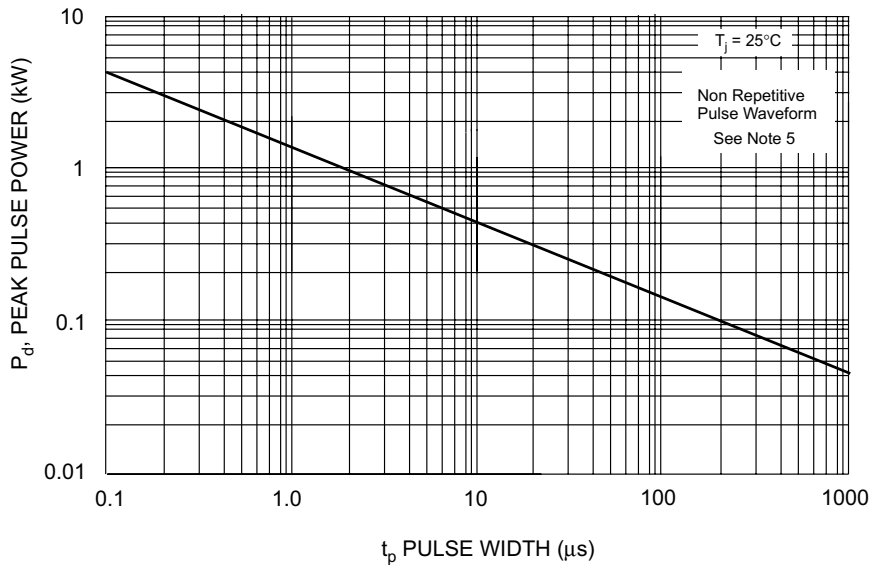


Fig. 3 Pulse Rating Curve

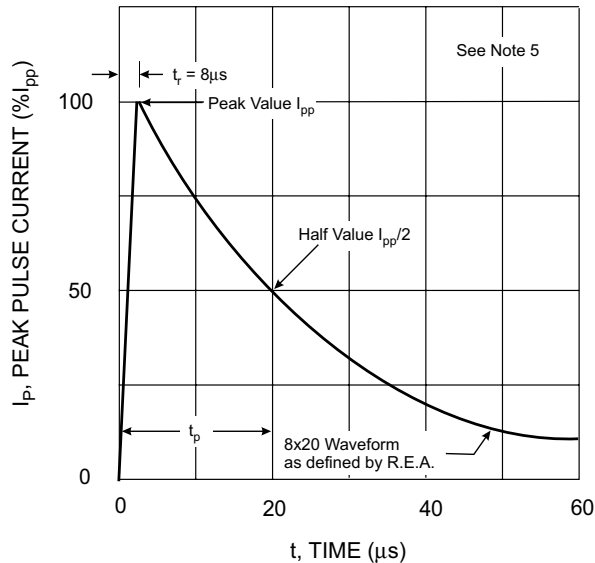


Fig. 4 Pulse Waveform

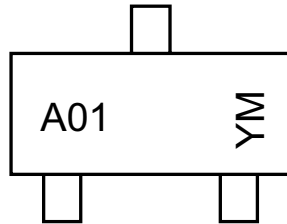
Notes: 4. Measured from  $V_{CC}$  to ground pin.  
5. Curves apply to TVS element of device.

## Ordering Information (Note 6)

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

Notes: 6. 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
Code	J	K	L	M	N	O	P

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

## Typical Application Schematics

