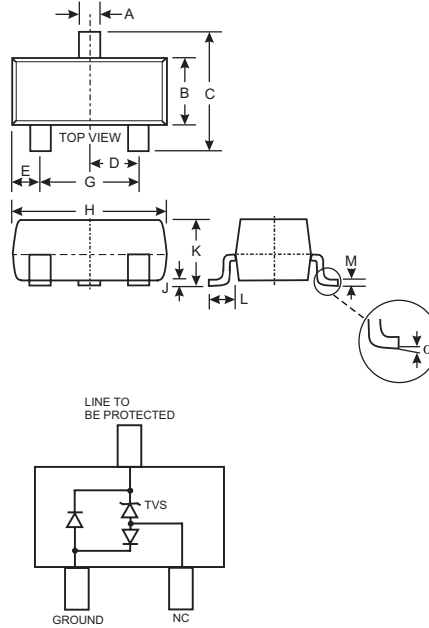


Features

- 300 Watts Peak Pulse Power ($t_p = 8 \times 20 \mu s$)
- Transient Protection for data, signal, and V_{CC} bus to IEC61000-4-2 level 4 (ESD) and IEC 61000-4-4 (EFT)
- Low Capacitance, typ. < 2 pF
- Low Leakage Current
- Unidirectional Configuration
- 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
- Terminal Connections: See Diagram
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Marking: A05 + Date Code, See Sheet 3
- Weight: 0.008 grams (approximate)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	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		

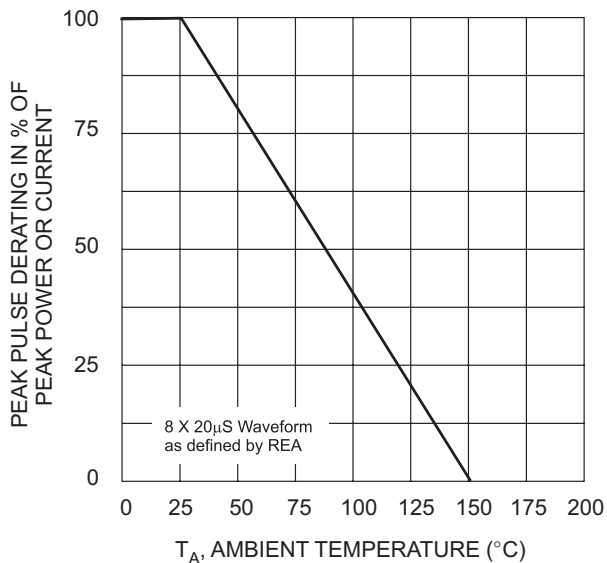
Maximum Ratings, Total Device @ $T_A = 25^\circ C$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8 \times 20 \mu s$)	P_{pk}	300	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	286	$^\circ C/W$
Operating and Storage and Temperature Range	T_j, T_{STG}	-55 to +150	$^\circ C$

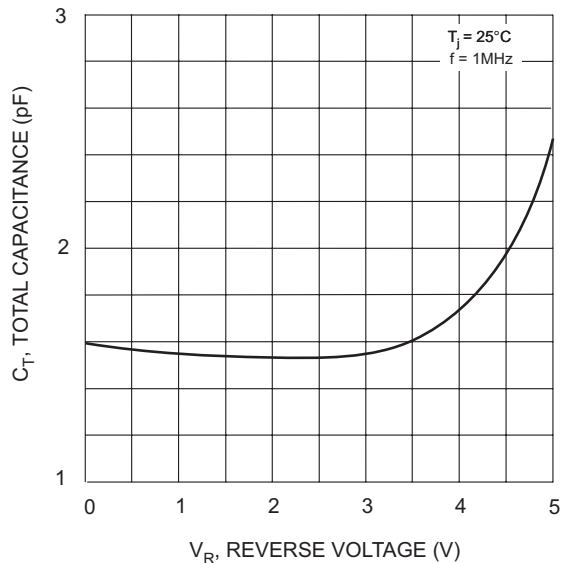
Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

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	6.0	—	1.0	20	11.0	17	1.6

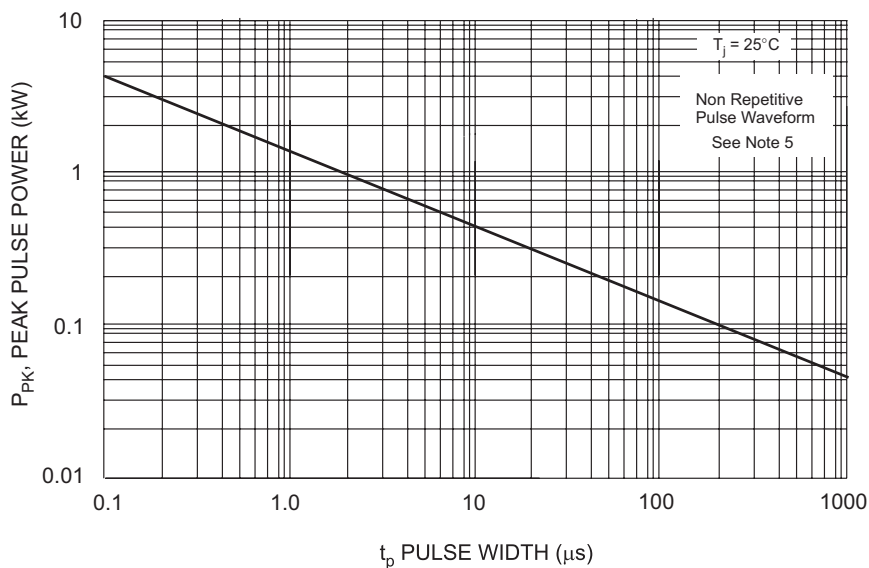
- Notes:
1. $V_R = 0V, f = 1MHz.$
 2. $t_p = 8 \times 20 \mu s.$
 3. Clamping voltage value is based on an $8 \times 20 \mu s$ peak pulse current (I_{pp}) waveform.
 4. No purposefully added lead.



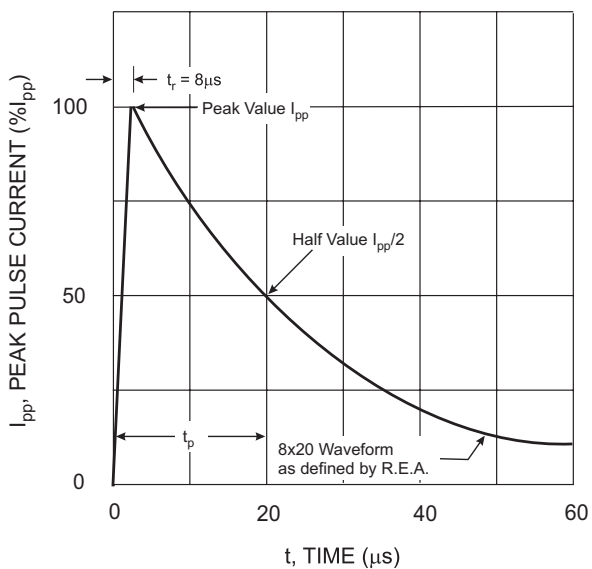
T_A , AMBIENT TEMPERATURE (°C)
Fig. 1 Pulse Derating Curve



V_R , REVERSE VOLTAGE (V)
Fig. 2 Typ. Total Capacitance vs Reverse Voltage



t_p PULSE WIDTH (µs)
Fig. 3 Pulse Rating Curve



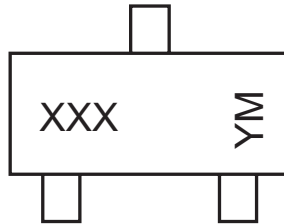
t , TIME (µs)
Fig. 4 Pulse Waveform

Ordering Information (Note 5)

Device	Packaging	Shipping
DLP05LC-7-F	SOT-23	3000/Tape & Reel

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

Marking Information



XXX = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

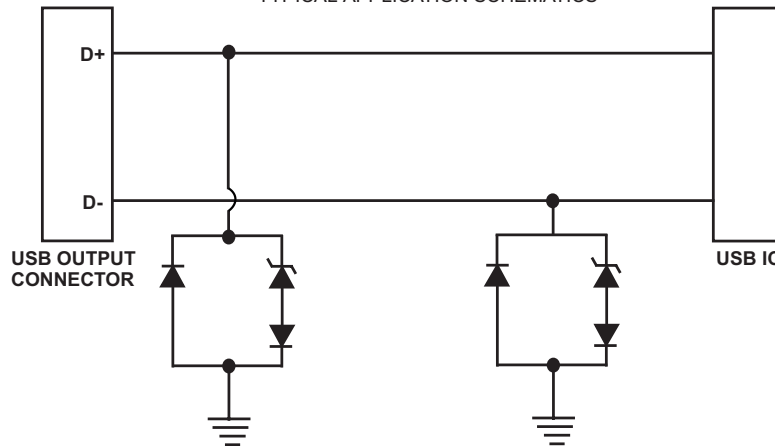
Date Code Key

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	M	N	P	R	S	T	U	V	W

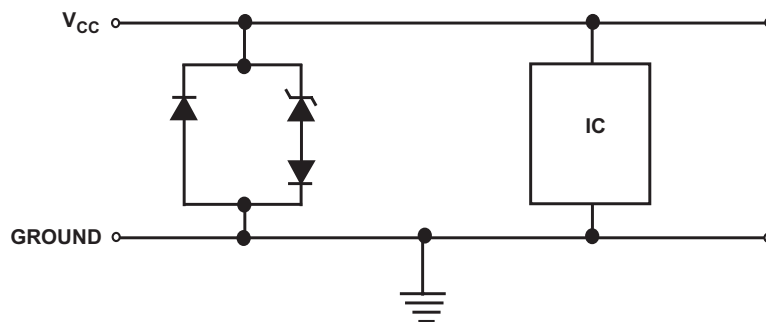
Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Typical Application Schematics

TYPICAL APPLICATION SCHEMATICS



TYPICAL USB DATA LINE APPLICATION



TYPICAL V_{CC} POWER LINE PROTECTION

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