Leiditech

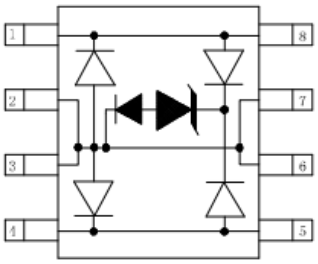
LC03-6

Low Capacitance TVS

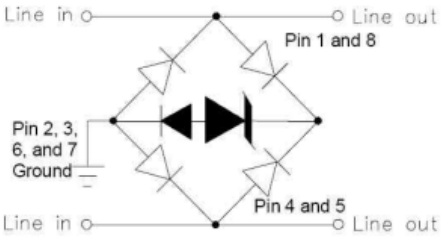
Features

- Ultra low leakage: nA level
- Operating voltage: 6V
- Low clamping voltage
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±15kV
    - Contact discharge: ±8kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - – IEC61000-4-5 (Lightning) 100A (8/20μs)
- RoHS Compliant

Dimensions SO-8



Pin Configuration



Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Mechanical Characteristics

- Package: SO-8
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:500pcs
- Reel Size:7 inch

Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	2000	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	± 15	Kv
ESD per IEC 61000−4−2 (Contact)		± 8	
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

Electrical Characteristics(TA=25°C unless otherwise specified)

Part Number	Device Marking	V_{RWM} (V)	V_{BR} (V)	I_T (mA)	V_C @50A	Vc		I_R μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
LC03-6	LC-6	6	6.7	1	15	20	100	5	8

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

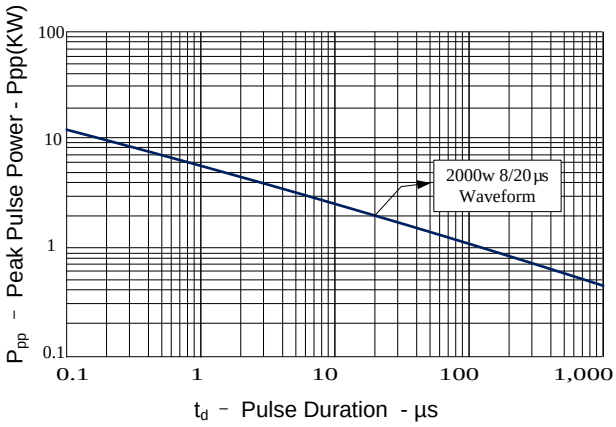


Figure 2: Power Derating Curve

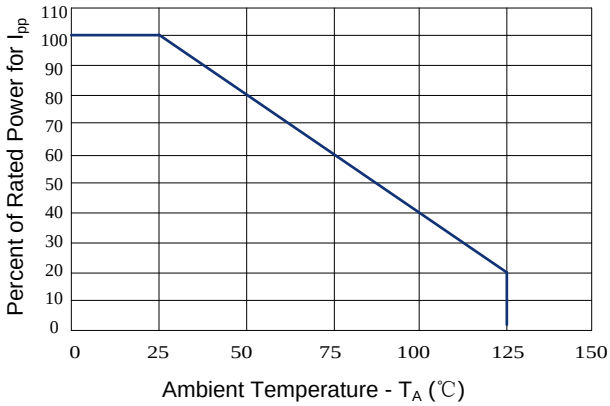


Figure3: Pulse Waveform

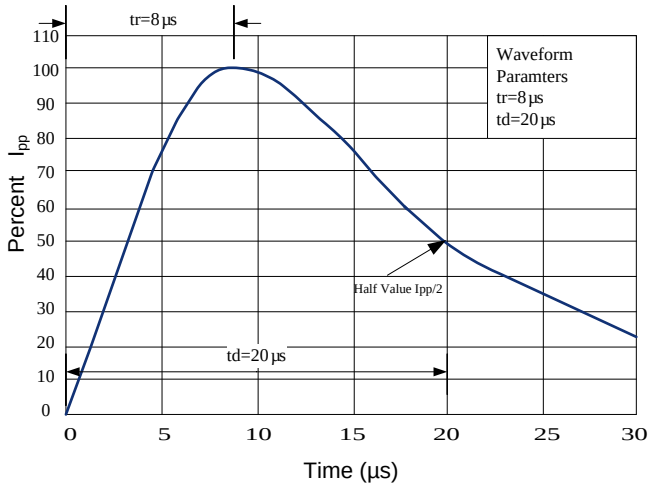


Figure 4: Clamping Voltage vs. Peak Pulse Current

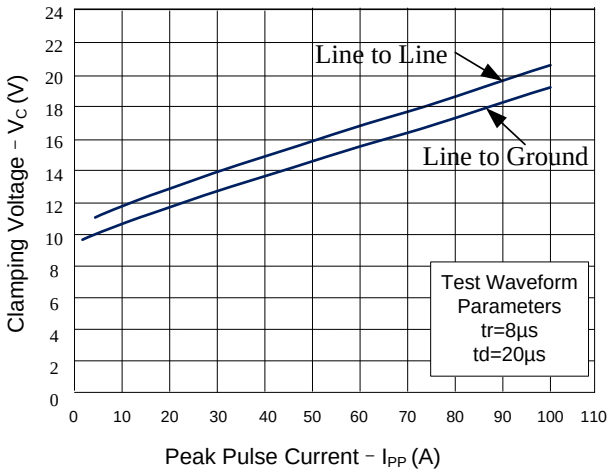


Figure 5: Capacitance vs. Reverse Voltage

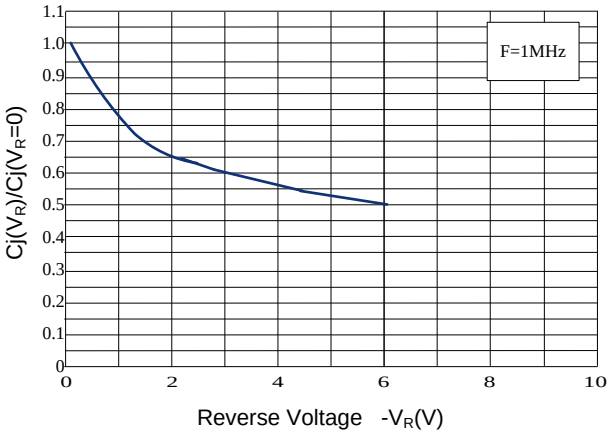
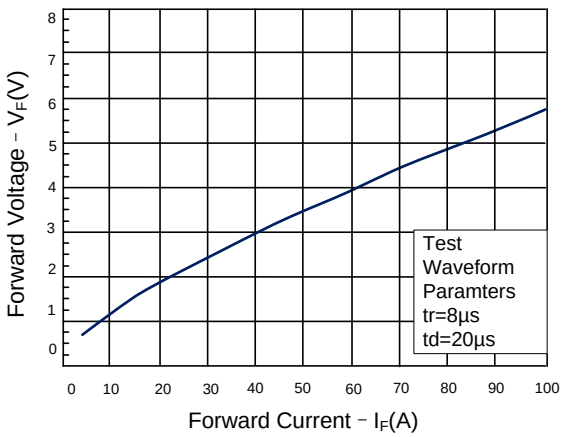
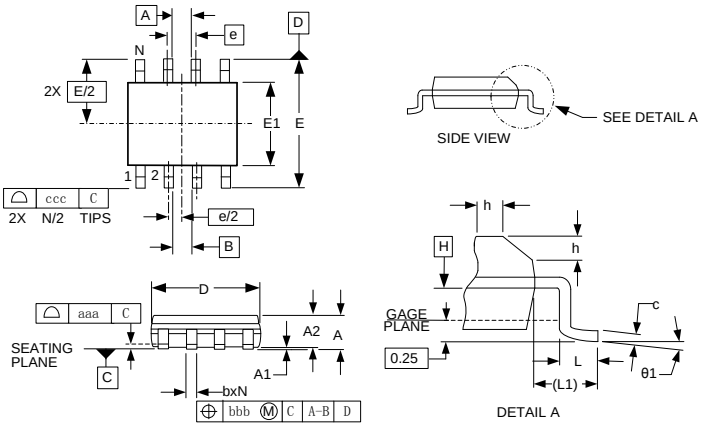


Figure 6: Forward Voltage vs. Forward Current



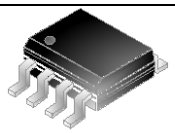
SO-08 Package Outline & Dimensions

PACKAGE OUTLINE



NOTES:

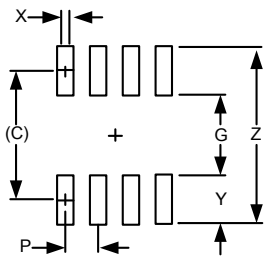
1. Controlling Dimensions Are In Millimeters (Angles In Degrees).
2. Datums -A- And -B- To Be Determined At Datum Plane -H-.
3. Dimensions “E1” And “D” Do Not Include Mold Flash,Protrusions Or Gate Burrs.
4. Reference JEDEC STD MS-012,VARITION AA.



SO-8

DIMENSIONS

DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.053	-	.069	1.35	-	1.75
A1	.004	-	.009	0.10	-	0.225
A2	.051	-	.060	1.30	-	1.50
b	.015	-	.019	0.39	-	0.48
c	.008	-	.010	0.21	-	0.26
D	.185	.193	.201	4.70	4.90	5.10
E1	.146	.154	.161	3.70	3.90	4.10
E	.236BSC			6.00BSC		
e	.050 BSC			1.27 BSC		
h	.010	-	.020	0.25	-	0.50
L	.020	.028	.031	0.50	0.72	0.80
θ1	0°	-	8°	0°	-	8°
L1	(.041)			(1.04)		
N	8			8		
aaa	.004			0.10		
bbb	.010			0.25		
ccc	.008			0.20		



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.205)	(5.20)
G	.118	3.00
P	.050	1.27
X	.024	0.60
Y	.087	2.20
Z	.291	7.40

Notes

1. This Land Pattern Is For Reference Purposes Only.Consult Your Manufacturing Group To Ensure Your Company’s Manufacturing Guidelines Are Met.
2. Reference IPC-SM-782A, RLP NO. 300A.

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