L08BT1006

List

L08BT1006

Surface Mount TVS Bi-Directional For ESD Protection : 8V

Features

- Protects one data or power line.
- Operating voltage : 8V
- Low clamping voltage
- IEC 61000-4-2 (ESD) immunity test : Air discharge: ±30kV
  Contact discharge: ±30kV
- IEC61000-4-5 (Lightning) 6A (8/20μs)
- We declare that the material of product compliance with RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex.L08BT1006-H.

Applications

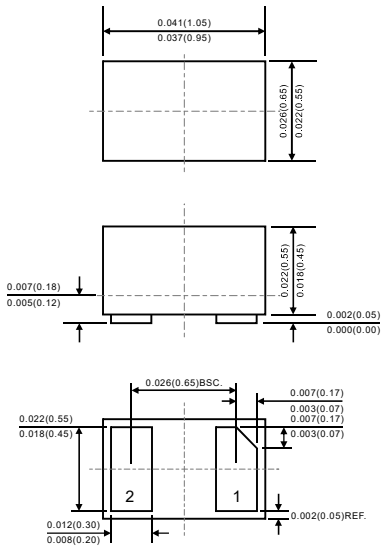
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

Mechanical data

- T1006P2 package
- Molding compound flammability rating : UL94V-0
- Making part number, data code.
- Packaging : Tape and reel.
- Weight : Approximated 0.73 mg.

Package outline

T1006P2



Dimensions in inches and (millimeters)

Maximum ratings (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power (8/20μs)	P_{PK}	100	W
Peak pulse current (8/20μs)	I_{PP}	6	A
ESD Per IEC 61000-4-2 (Air)	V_{ESD}	±30	KV
ESD Per IEC 61000-4-2 (Contact)		±30	
Operating temperature range	T_J	-55 ~ +125	℃
Storage temperature	T_{STG}	-55 to +150	℃
Maximum lead temperature for soldering during 10s	T_L	260	℃

Electrical characteristics (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse working voltage	V_{RWM}				8	V
Breakdown voltage	V_{BR}	I_T = 1mA	8.5			V
Reverse leakage current	I_R	V_{RWM} = 8V			0.5	μA
Clamping voltage 1	V_{C1}	I_{PP1} = 1A (8 x 20μs Pulse)			11	V
Clamping voltage 2	V_{C2}	I_{PP2} = 1A (8 x 20μs Pulse)			18	V
Junction capacitance	C_P	V_R=0V, f=1MHz		9		pF

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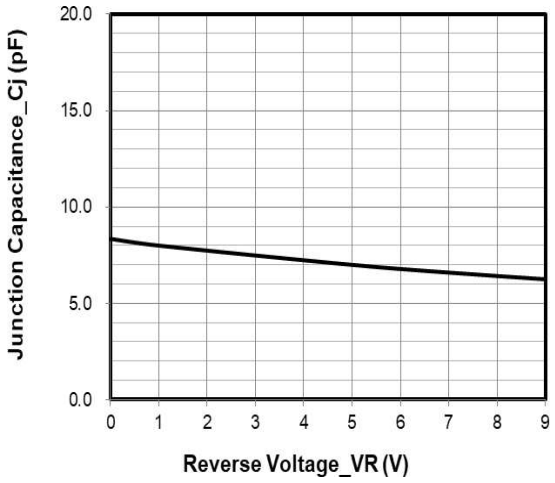
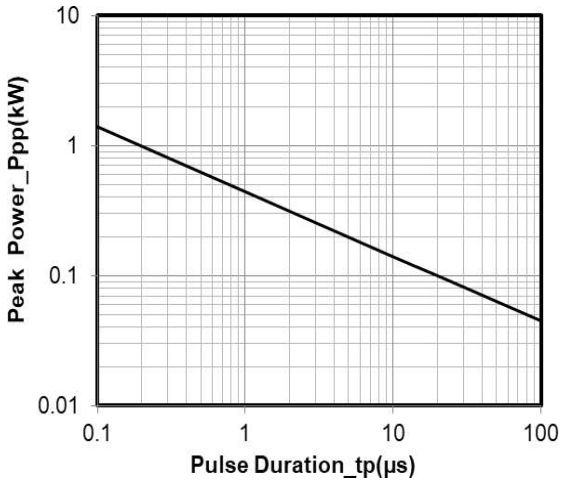
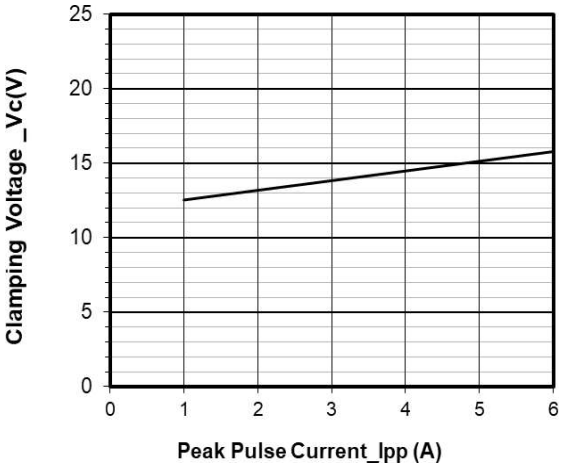
Typical performance characteristics (T_A=25℃ Unless otherwise specified)



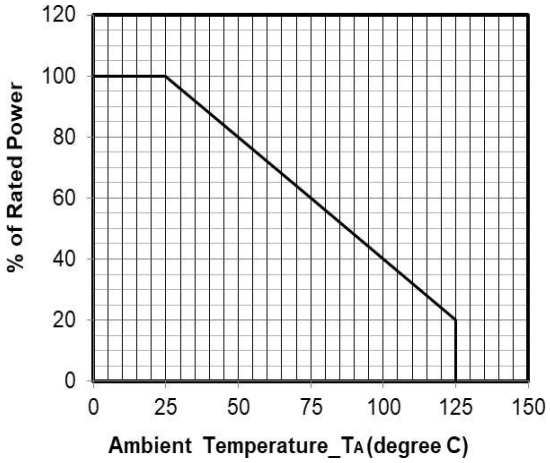
Junction Capacitance vs. Reverse Voltage



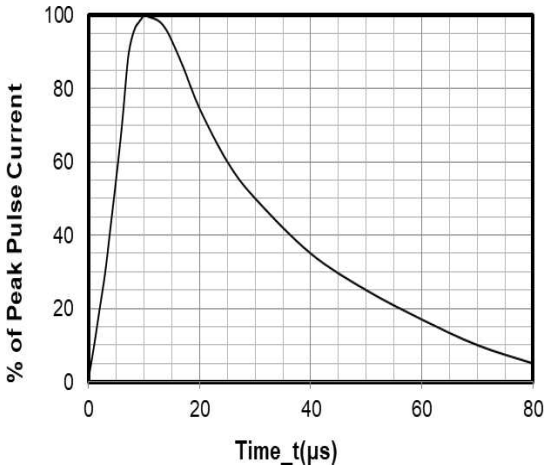
Peak Pulse Power vs. Pulse Time



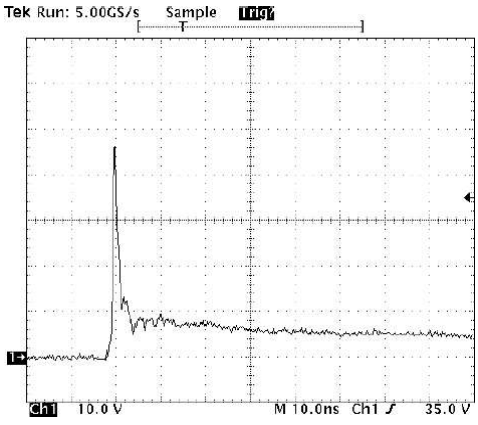
Clamping Voltage vs. Peak Pulse Current (tp = 8/20μs)



Power Derating Curve



8 X 20μs Pulse Waveform



Note: Data is taken with a 10x attenuator

8 kV Contact per IEC61000−4−2

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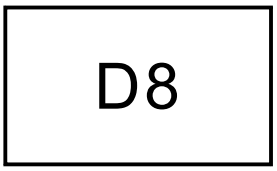
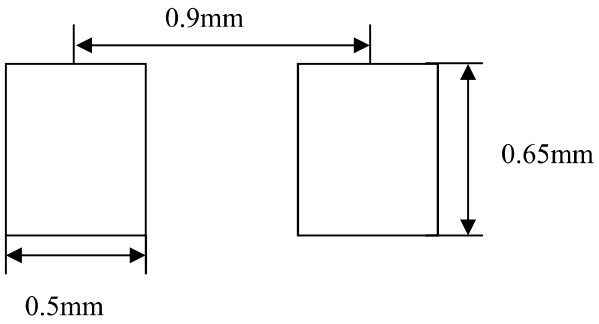
Marking Information



Suggested solder pad layout



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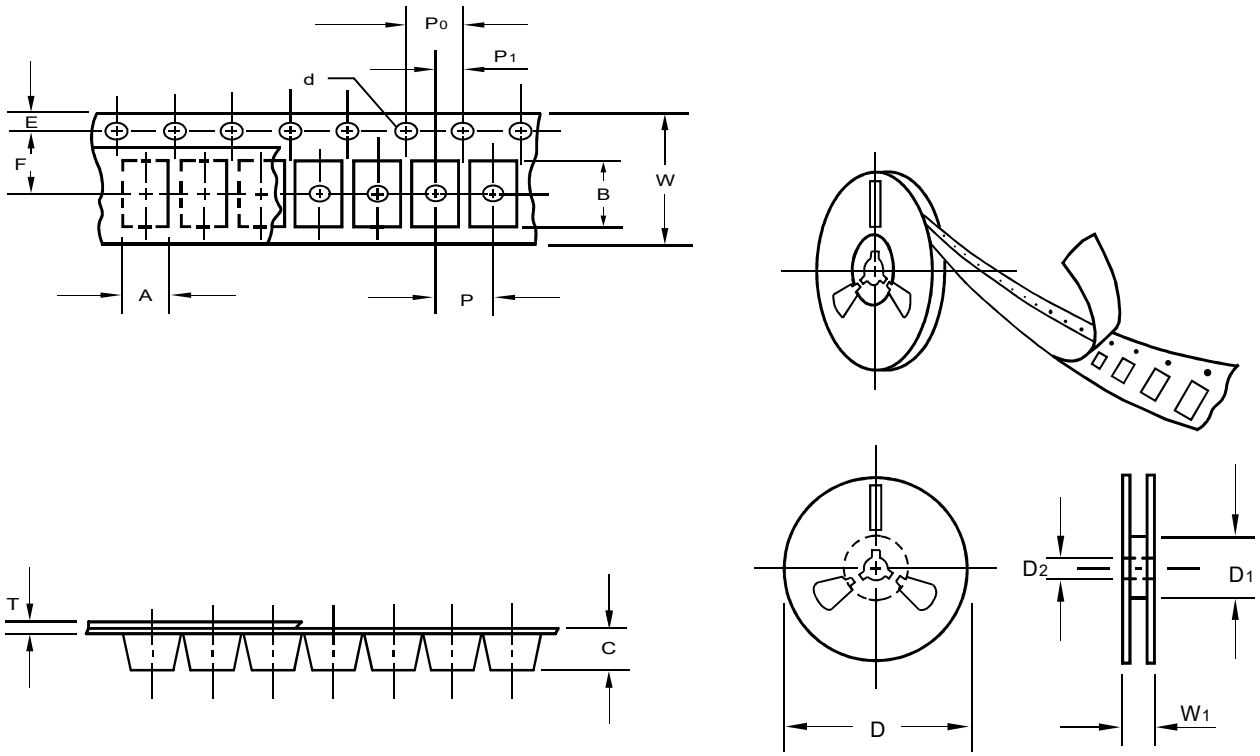

unit:mm

Item	Symbol	Tolerance	T1006P2
Carrier width	A	0.1	0.75
Carrier length	B	0.1	1.15
Carrier depth	C	0.1	0.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	1.0	178.00
7" Reel inner diameter	D_1	Min.	60.0
Feed hole diameter	D_2	0.2	13.0
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.05	2.00
Overall tape thickness	T	0.05	0.23
Tape width	W	0.2	8.00
Reel width	W_1	Max.	13.5

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.

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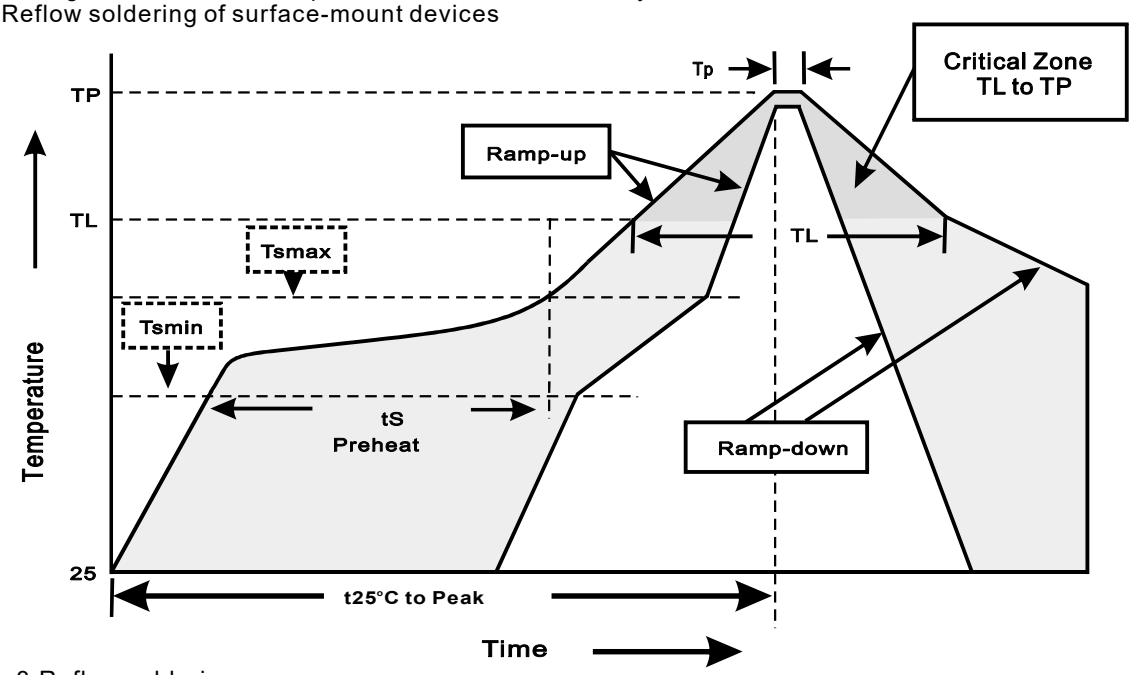
Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
T1006P2	7"	10,000	4.0	100,000	183*123*183	178	382*257*387	800,000	15.0

Suggested thermal profiles for soldering processes

1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T_L to T_P)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(t_s)	 150°C 200°C 60~120sec
Tsmax to T_L -Ramp-upRate	 <3°C/sec
Time maintained above: -Temperature(T_L) -Time(t_L)	 217°C 60~260sec
Peak Temperature(T_P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t_P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes