

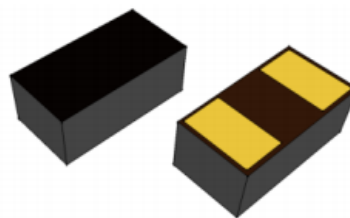
Transient Voltage Suppressor

Version: A0 2019-11-05

Features

- IEC 61000-4-2(ESD)±15KV(air), ±8KV(contact)
- Low leakage current(<10nA)
- Low capacitance: 0.05pF (Typical)
- Small package: DFN1006-2L
- MSL1

Exterior



DFN1006-2L

Application information

- Smart Phone/Mobile Internet Device
- Laptop/Desktop Computer
- Antennas (Cell Phones, GPS...)
- High Speed Ethernet
- USB 2.0 and USB 3.0
- Lightning and Thunder Bolt Interface
- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Display Port Interface (DP)
- Unified Display Interface (UDI)
- Mobile Display Digital Interface (MDDI)

Agency Approvals

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003
	Mean lead free

Schematic



Electrical Parameter ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Continuous Operating Voltage	V_{DC}	---	---	---	5	V
Trigger Voltage	V_T	IEC61000-4-2 8KV contact discharge	---	450	---	V
Clamping Voltage	V_C	IEC61000-4-2 8KV contact discharge	---	40	---	V
Leakage Current	I_L	DC 5V shall be applied on component	---	---	10	nA
Capacitance	C_P	Measured at 10MHz	---	0.05	---	pF
ESD Pulse Withstand	Pulses	IEC61000-4-2 8KV contact discharge	1000	---	---	---

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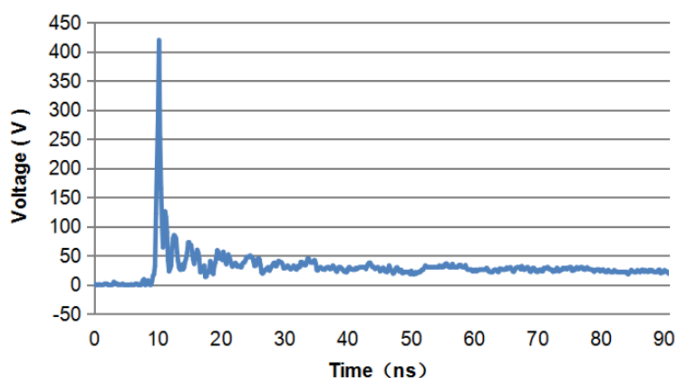
Part Numbering System

BV FA 05 U C E
(1) (2) (3) (4) (5) (6)

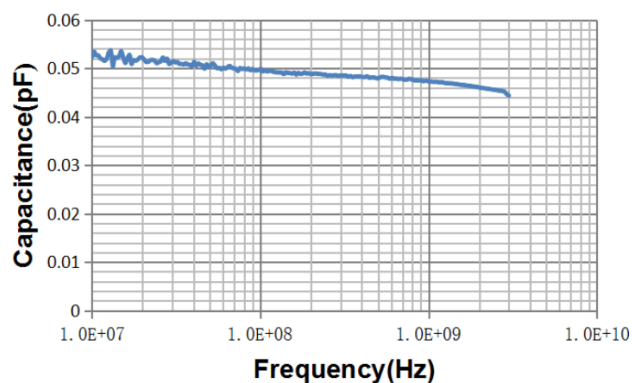
- (1) Bencent Transient Voltage Suppressor
- (2) Package:DFN1006-2L
- (3) Off-state Voltage: 5V
- (4) Low Capacitance
- (5) Bidirectional
- (6) Bencent internal code

Typical Characteristics

Typical ESD Response (IEC 61000-4-2,
8KV contact discharge)



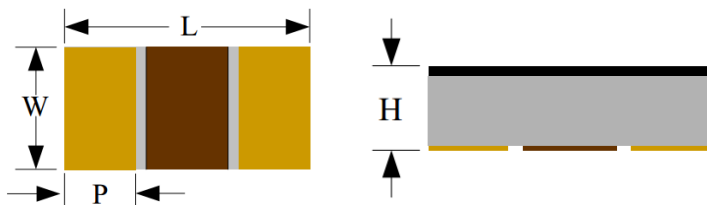
Typical Device Capacitance VS. Frequency



Thermal Considerations

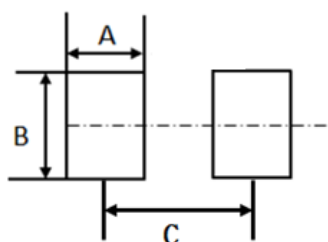
symbol	Parameter	Value	Unit
T _J	Operating Junction Temperature Range	-55 to +125	°C
T _S	Storage Temperature Range	-40 to +85	°C

Product Dimensions



REF	mm	inch
L	0.90~1.10	0.035~0.043
W	0.42~0.62	0.017~0.024
P	0.15~0.35	0.006~0.014
H	0.25~0.45	0.010~0.018

Recommended Soldering Pad

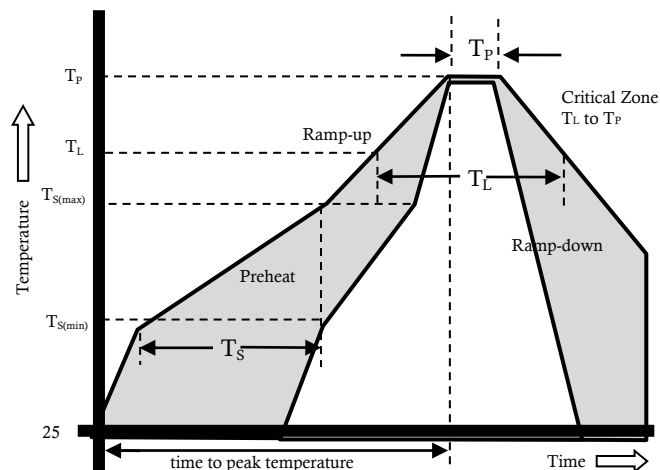


REF	mm	inch
A	0.50	0.020
B	0.65	0.026
C	0.90	0.035

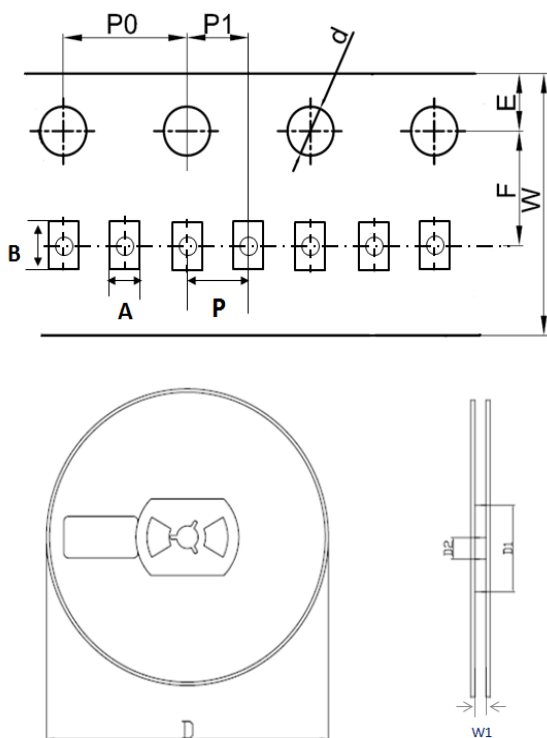
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Reflow Profile

Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (min to max)	60 – 180 secs
Average ramp up rate (Liquid)		3°C/s max
Tamp (T _L) to peal		
T _S (max) to T _L - Ramp-up Rate		3°C/s max
Reflow	- Temperature (T _L) (Liquid)	217°C
	- Temperature (T _L)	60 – 150 secs
Peak Temperature (T _P)		260+0/-5 °C
Time within 5°C of actual peak Temperature (T _P)		30secs
Ramp-down Rate		6°C/s max
Time 25°C to peak Temperature (T _P)		8 mins max.
Do not exceed		260°C



Package Reel Information



REF	mm	inch
A	0.70+/-0.05	0.028+/-0.002
B	1.15+/-0.05	0.045+/-0.002
d	1.50+0.1/-0	0.059+0.004/-0
D	178.00+/-2.00	7.008+/-0.079
D1	55.00+/-3.00	2.165+/-0.118
D2	13.00+/-0.50	0.512+/-0.020
E	1.75+/-0.10	0.069+/-0.004
F	3.50+/-0.20	0.138+/-0.008
P	2.00+/-0.20	0.079+/-0.008
P0	4.00+/-0.20	0.157+/-0.008
P1	2.00+/-0.20	0.079+/-0.008
W	8.00+/-0.20	0.315+/-0.008
W1	9.50+/-1.00	0.374+/-0.039

OUTLINE	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)	CARTON SIZE(mm)		
				L	W	H
TAPING	10,000	300,000	178	390	370	220