

## Transient Voltage Suppressor

Version: A2 2021-06-24

### Features

- IEC 61000-4-2(ESD)±25KV(air), ±25KV(contact)
- IEC61000-4-5(Lightning) 5A (8/20uS)
- IEC61000-4-4(EFT) 40A (5/50nS)
- 60Watts peak pulse power (tp=8/20μS)
- Low clamping voltage
- Weight approx. 1.0 mg
- Moisture sensitivity level: Level 1
- $V_{SB}$  min value 5.5V
- Small package: DFN1006-2L

### Exterior



DFN1006-2L


### Application information

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

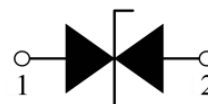
### Package (top view)



### Agency Approvals

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

### Schematic



### Part Number and Electrical Parameter

Part Number	$I_{DRM}@V_{DRM}$		$V_{BR}^{①}@I_R$		$V_c@I_{pp}^{②}$		$V_c@I_{pp}^{②}$		$Co^{③}$	
	$\mu A$	V	V	mA	V	A	V	A	pF	
	MAX		MIN		MAX		MAX		TYP	MAX
BV-FA05ZCD	0.5	5	5.6	1	10	1	12	5	15	18

Absolute maximum ratings measured at T= 25°C RH = 45%-75% (unless otherwise noted).

①  $V_{BR}$  is measured at  $I_R=1mA$

② Surge Waveform: 8/20μS.

③ Off-state capacitance is measured in VDC=0V, VRMS=0.3V, f=1MHz

## Transient Voltage Suppressor

Part Numbering System

Mark

BV FA 05 Z C D  
(1) (2) (3) (4) (5) (6)

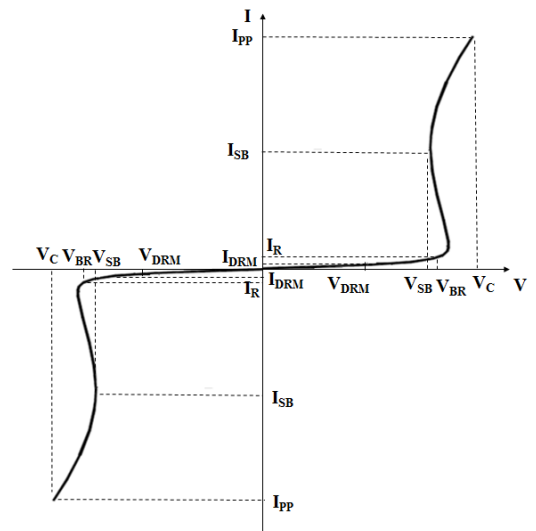
- (1) Bencent Transient Voltage Suppressor
- (2) Package:DFN1006-2L
- (3) Off-state Voltage: 5V
- (4) Normal Capacitance
- (5) Bidirectional
- (6) Bencent internal code



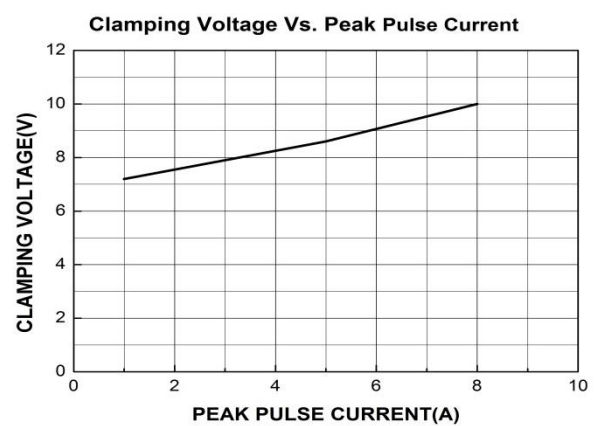
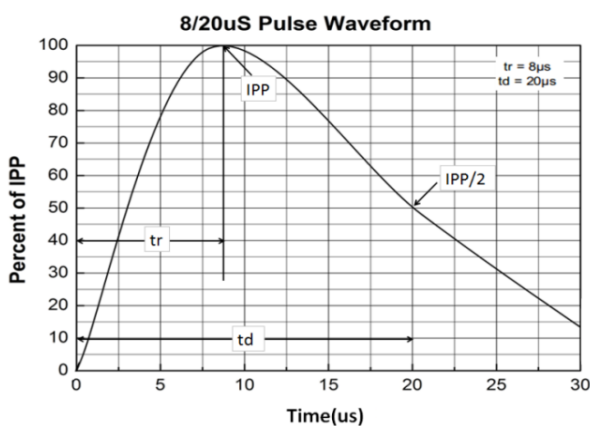
PD: Part Number

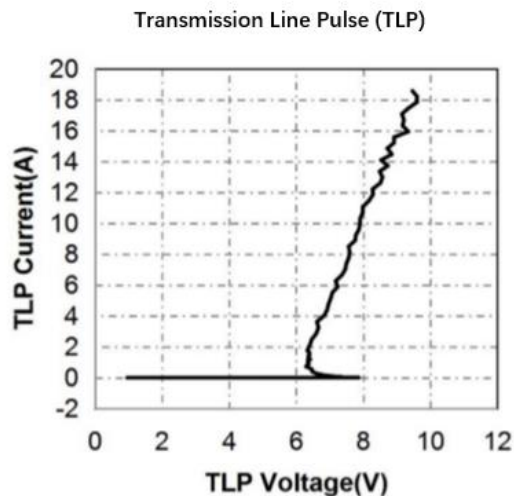
### V-I Curve

Parameters	Definition
$V_C$	Clamping voltage
$I_{PP}$	Surge waveform 8/20us
$V_{DRM}$	Stand-off Voltage
$V_{BR}$	Breakdown Voltage
$I_{DRM}$	Reverse Leakage Current
$I_R$	Test current
$V_{SB}$	Snapback voltage
$I_{SB}$	Test current
$P_{pp}$	Peak Pulse Power Dissipation



### Typical Characteristics





### Thermal Considerations

symbol	Parameter	Value	Unit
$T_j$	Operating Junction Temperature Range	-55 to +125	°C
$T_s$	Storage Temperature Range	-55 to +150	°C

### Environmental Characteristics

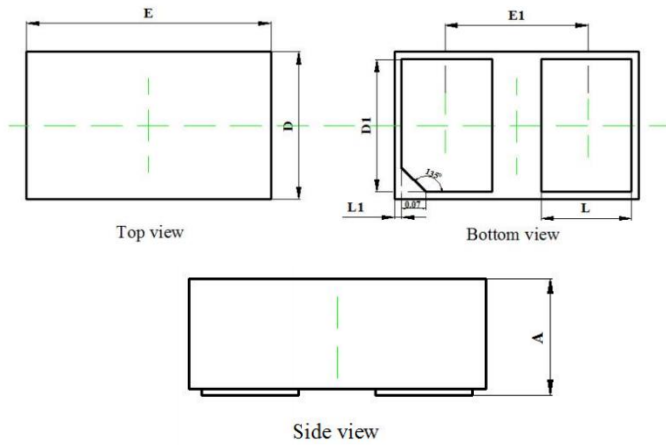
Testing items	Technical standards
High temperature Reverse Bias Test	Temperature: $125 \pm 3^\circ\text{C}$ Bias= $80\%V_{\text{DRM}}$ Time:168H
High Temperature Life Test	Temperature: $150^\circ\text{C}$ Time:168H
High-low Temperature Cycle test	Temperature: From $-55^\circ\text{C}$ to $125^\circ\text{C}$ Dwell time : 30min, 10~100cycles
High Temperature & High Humidity Test	Temperature: $85^\circ\text{C}$ Humidity: 85% Time:168H
Pressure cooker Test	Temperature: $121^\circ\text{C}$ , 2atm. Humidity: 100% Time:24H
Resistance of soldering heat	Temperature: $260 \pm 5^\circ\text{C}$ Time of dip soldering: 10s, 3times

Note: The above testing items can be specified by customer's special request

Transient Voltage Suppressor

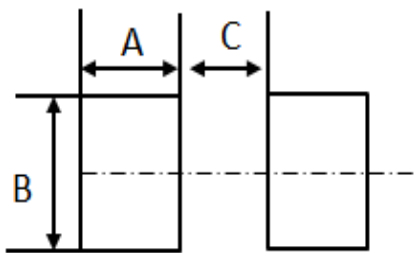
Version: A2 2021-06-24

Product Dimensions



REF	mm	inch
A	0.35~0.45	0.014~0.018
D	0.55~0.65	0.022~0.026
E	0.95~1.05	0.037~0.041
D1	0.42~0.52	0.017~0.020
E1	0.55~0.65	0.022~0.026
L	0.27~0.37	0.011~0.015
L1	0.00~0.10	0.000~0.004

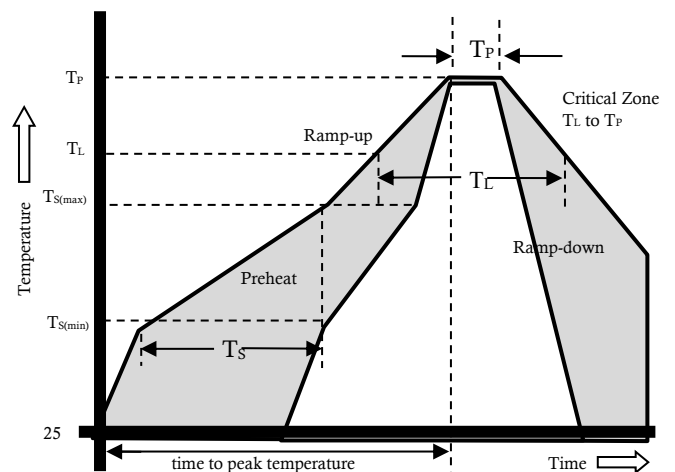
Recommended Soldering Pad



REF	mm	inch
A	0.35	0.014
B	0.60	0.024
C	0.35	0.014

Reflow Profile

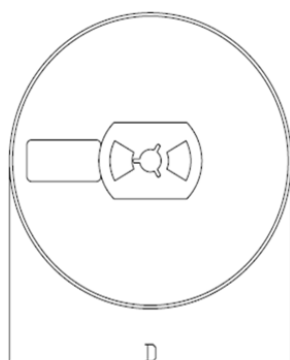
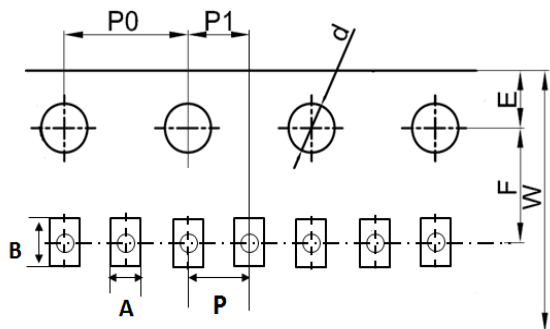
Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (min to max)	60 – 180 secs
Average ramp up rate (Liquid) T <sub>amp</sub> (T <sub>L</sub> ) to peak		3°C/s max
T <sub>s(max)</sub> to T <sub>L</sub> - Ramp-up Rate		3°C/s max
Reflow	- Temperature (T <sub>L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



**Transient Voltage Suppressor**

Version: A2 2021-06-24

**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

单击下面可查看定价，库存，交付和生命周期等信息

[>>Bencent \(槟城\)](#)