

## Transient Voltage Suppressor

### Features

- IEC 61000-4-2(ESD)±15KV(air), ±8KV(contact)
- IEC61000-4-5(Lightning) 4A (8/20uS)
- IEC61000-4-4(EFT) 40A (5/50nS)
- 96 Watts peak pulse power (tp=8/20μ S)
- Low capacitance: 0.25pF (Typical)
- Low clamping voltage
- Weight approx. 1.0 mg
- Moisture sensitivity level: Level 1
- Small package: DFN1006-2L

### Exterior



DFN1006-2L


### Application information

- Serial ATA
- Desktops, Servers and Notebooks
- Cellular Phones
- MDDI Ports
- USB2.0 Data Line Protection
- Display Ports
- HDMI

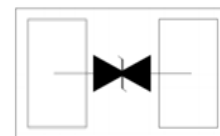
### Package (top view)



### 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 <sub>DRM</sub> @V <sub>DRM</sub>		V <sub>BR</sub> <sup>①</sup> @I <sub>R</sub>		V <sub>c</sub> @I <sub>pp</sub> <sup>②</sup>		V <sub>c</sub> @I <sub>pp</sub> <sup>②</sup>		Co <sup>③</sup>	
	μA	V	V	mA	V	A	V	A	pF	
	MAX		MIN		MAX		MAX		TYP	MAX
BV-FA05UCA	0.1	5	6	1	16	2	24	4	0.25	0.4

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

① VBR is measured at I<sub>R</sub>=1mA

② Surge Waveform: 8/20μ S.

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

## Transient Voltage Suppressor

Part Numbering System

Mark

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

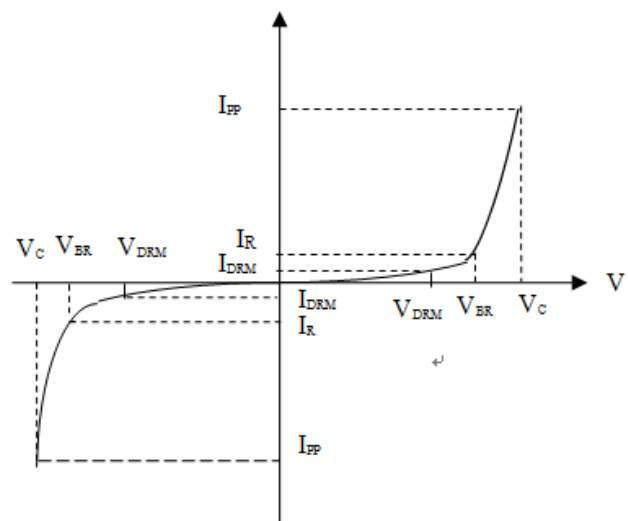
- (1) Bencent Transient Voltage Suppressor
- (2) Package:DFN1006-2L
- (3) Off-state Voltage: 5V
- (4) Low Capacitance
- (5) Bidirectional
- (6) Bencent intenal code



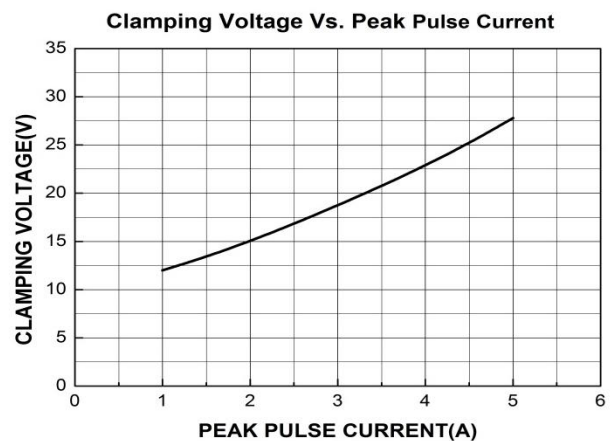
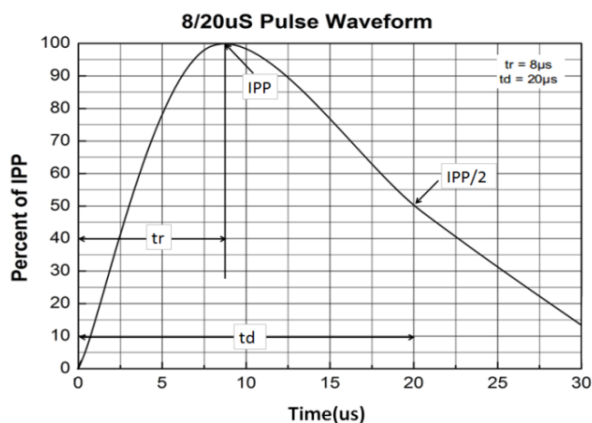
5BU: Part Number

### V-I Curve

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



### Typical Characteristics



### Thermal Considerations

symbol	Parameter	Value	Unit
$T_J$	Operating Junction Temperature Range	-40 to +125	$^{\circ}$ C
$T_S$	Storage Temperature Range	-55 to +150	$^{\circ}$ C

**Transient Voltage Suppressor**

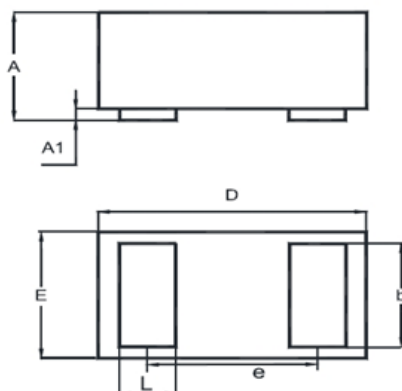
Version: A2 2019-04-24

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 $-40^{\circ}\text{C}$ 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

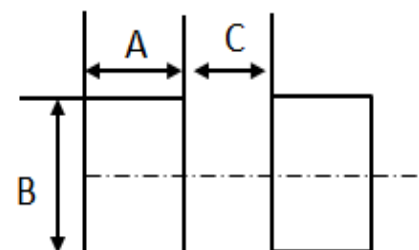
Note: The above testing items can be specified by customer's special request

Product Dimensions



REF	mm	inch
A	0.45~0.55	0.018~0.022
A1	0.00~0.05	0.000~0.002
D	0.95~1.05	0.037~0.041
E	0.55~0.65	0.022~0.026
b	0.40~0.60	0.016~0.024
e	0.64BSC	0.025BSC
L	0.15~0.35	0.006~0.014

Recommended Soldering Pad



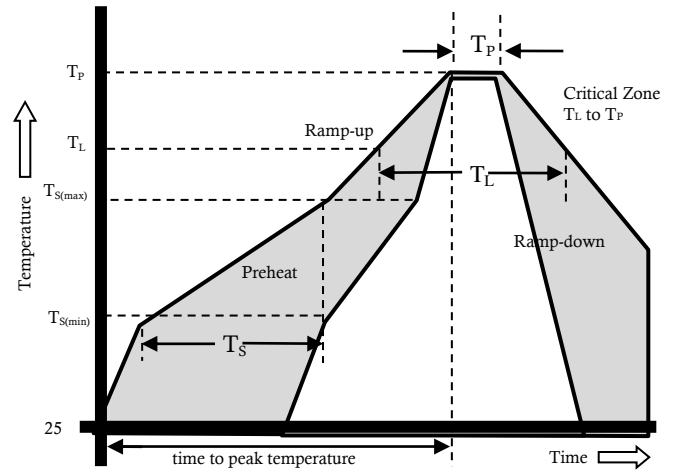
REF	mm	inch
A	0.35	0.014
B	0.60	0.024
C	0.35	0.014

Transient Voltage Suppressor

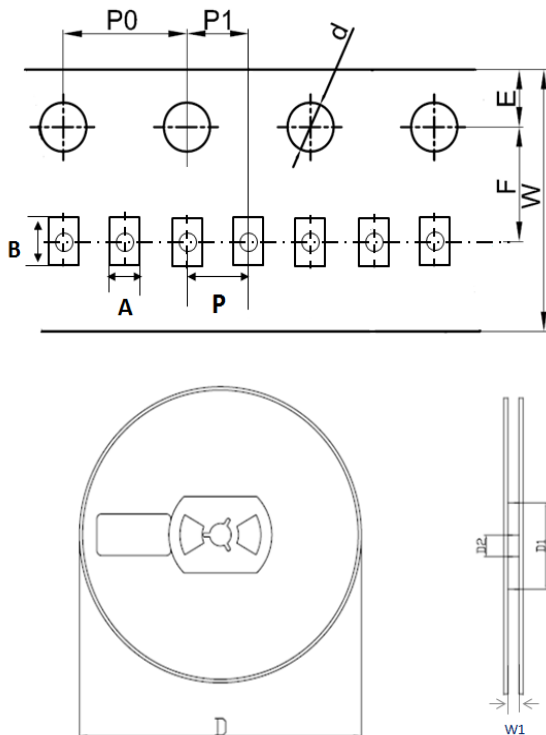
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Reflow Profile

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) Tamp ( $T_L$ ) to peak		3°C/s max
$T_S$ (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

单击下面可查看定价，库存，交付和生命周期等信息

[>>Bencent \(槟城\)](#)