BV-FE07ZA

Order Code: BV-FE07ZA

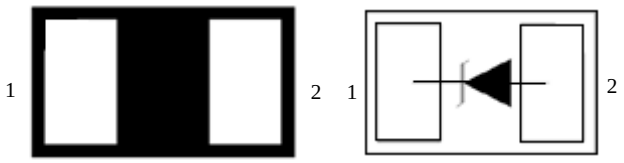
Transient Voltage Suppressor

Version: A1 2023-11-30

Features

- IEC 61000-4-2(ESD)±30KV(air), ±30KV(contact)
- 1300 Watts peak pulse power (tp=8/20μS)
- Low clamping voltage
- Moisture sensitivity level: level 3
- Small package saves board space (1610)

Exterior



DFN1610-2L

Application Information

- Power supplies
- Cellular phones
- Digital cameras
- Portable devices

Agency Approvals

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

Part Number and Electrical Parameter

Part Number	I_{DRM}@ V_{DRM}		V_{BR}①@ I_R		Vc@Ipp②		Vc@Ipp②		C_O③
	μA	V	V	mA	V	A	V	A	pF
	MAX		MIN		MAX		MAX		MAX
BV-FE07ZA	1	7	7.5	1	12	80	13	100	1000

Absolute maximum ratings measured at T_A= 25ºC 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 Bias=0V, f=1MHz

Part Numbering System

BV FE 07 Z A

(1) (2) (3) (4) (5)

(1) Bencent Transient Voltage Suppressor

(2) Package: DFN1610

(3) Stand off Voltage:7.0V

(4) Capacitance level: Normal Capacitance

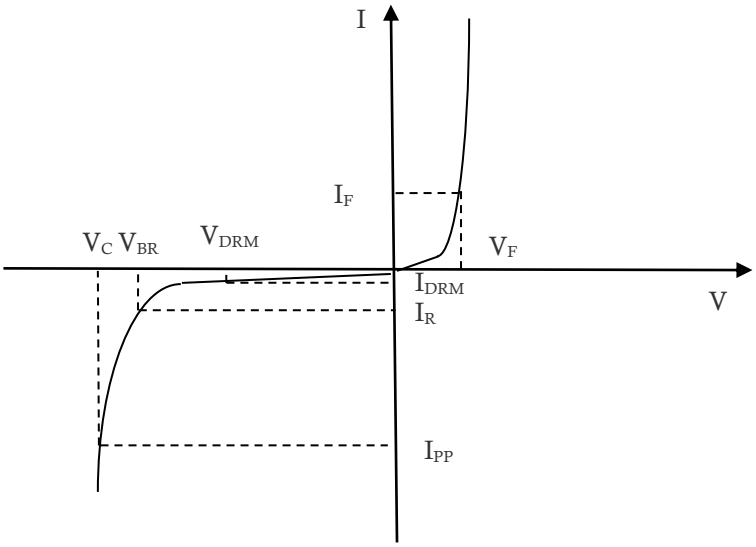
(5) Bencent Internal Code

Mark

Transient Voltage Suppressor

V-I Curve

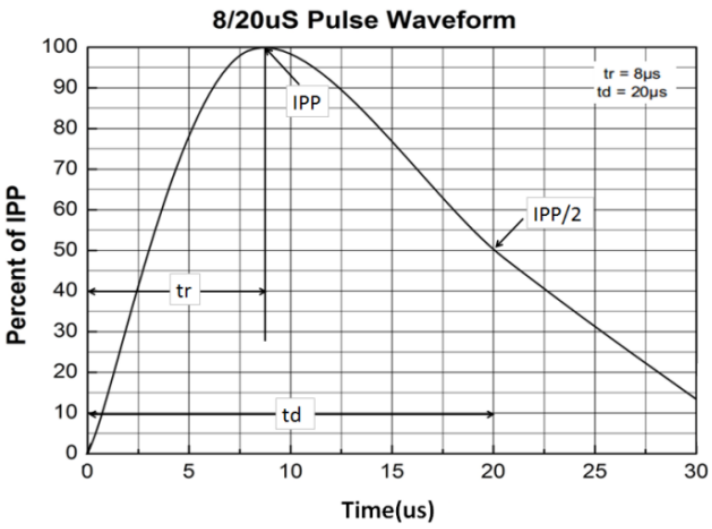
Parameters	Definition
V_C	Clamping Voltage
I_{pp}	Surge Waveform 8/20μs
V_{DRM}	Stand-off Voltage
I_{DRM}	Reverse Leakage Current
V_{BR}	Breakdown Voltage
I_R	Test Current
V_F	Forward Voltage
I_F	Test Current
Ppp	Peak Pulse Power Dissipation

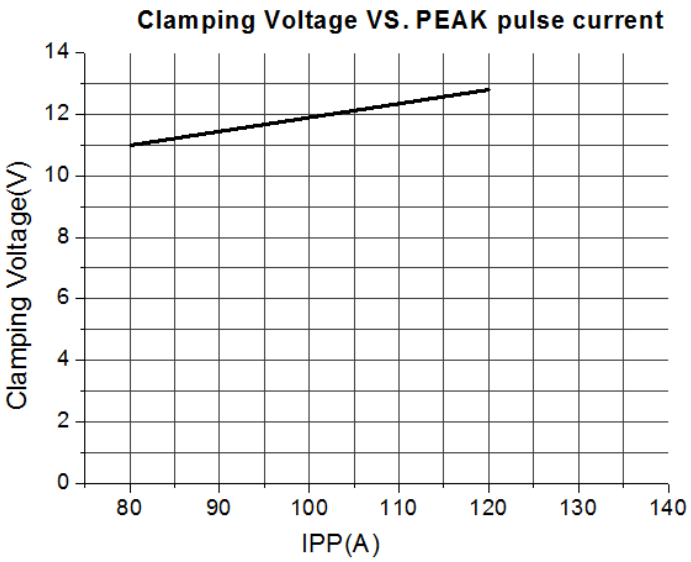


Thermal Considerations

symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-40 to +125	℃
T_S	Storage Temperature Range	-55 to +150	℃

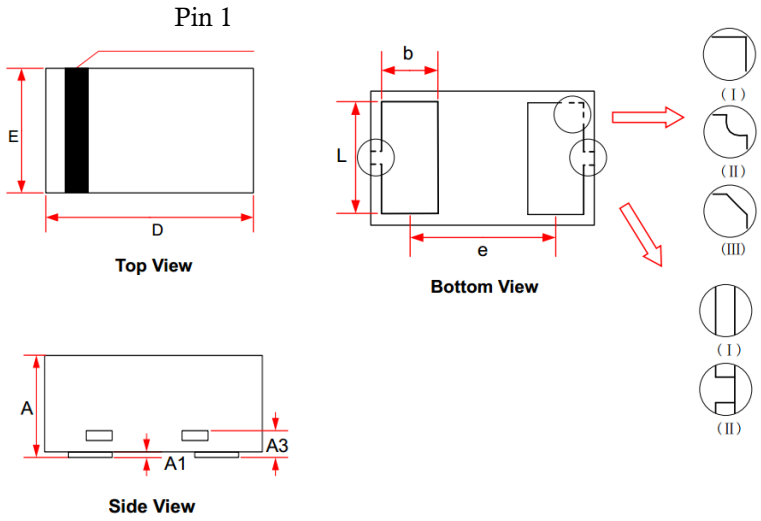
Typical Characteristics





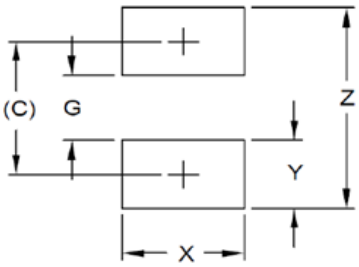
Transient Voltage Suppressor

Product Dimensions



REF	mm	inch
A	0.40~0.60	0.016~0.024
A1	0.00~0.05	0.000~0.002
b	0.35~0.45	0.014~0.018
A3	0.10~0.20	0.004~0.008
D	1.55~1.65	0.061~0.065
e	1.00~1.15 BSC	0.039~0.045 BSC
E	0.95~1.05	0.037~0.041
L	0.75~0.95	0.030-0.037

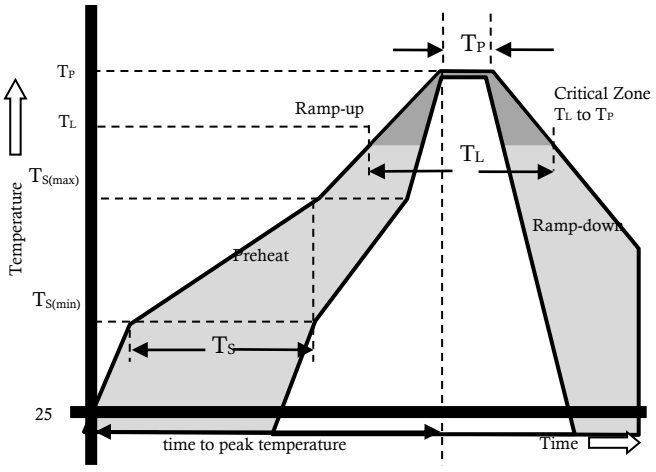
Recommended Soldering Pad



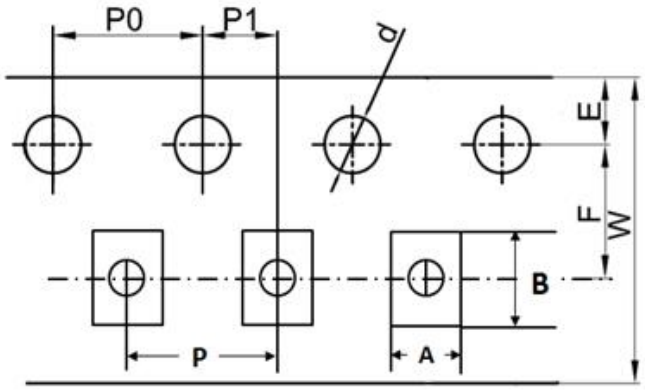
REF	mm	inch
C	1.225	0.048
G	0.600	0.024
X	1.000	0.039
Y	0.625	0.025
Z	1.850	0.073

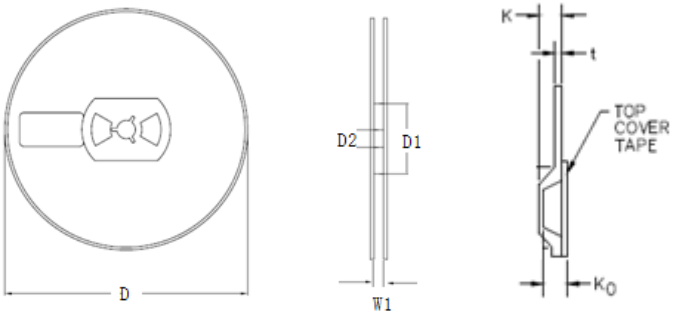
Reflow Profile

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(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	- Temperature (T_L) (Liquidus)	+217°C
	- Temperature (T_L)	60 – 150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		30
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C



Package Reel Information





REF	mm	inch
A	1.25+/-0.1	0.049+/-0.004
B	1.80+/-0.1	0.071+/-0.004
d	1.5+0.1/-0	0.061+0.004/-0
W	8.0+/-0.2	0.315+/-0.008
E	1.75+/-0.1	0.069+/-0.004
F	3.5+/-0.1	0.138+/-0.004
P	4.0+/-0.1	0.158+/-0.004
P0	4.0+/-0.1	0.158+/-0.004
P1	2.0+/-0.1	0.079+/-0.004
K	2.4 max	0.094 max
K_0	0.8+/-0.2	0.031+/-0.008
t	1.6+/-0.6	0.063+/-0.024
D	178+/-2.0	7.009+/-0.078
D1	55+/-3.0	2.165+/-0.118
D2	13+/-0.5	0.512+/-0.020
W1	8.6+/-0.1	0.339+/-0.04

Outline	Reel (pcs)	Per Carton (pcs)	Reel Diameters (mm)	Carton Size(mm)		
				L	W	H
Taping	3000	90,000	178	390	370	220