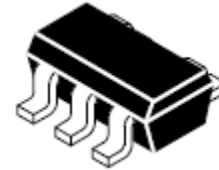


Transient Voltage Suppressor

Features

- IEC 61000-4-2(ESD)±15KV(air), ±10KV(contact)
- Low leakage current 0.5Ua (Max) at 5V
- Moisture sensitivity level: Level 1
- Small package: SOT23-6

Exterior



SOT23-6

Application Information

- USB 2.0
- Video Graphics Cards
- DVI
- IEEE 1394
- Monitors and Flat Panel Displays
- Notebooks
- 10/100 Ethernet

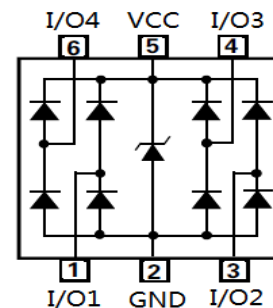
Package (top view)



Agency Approvals

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

Schematic Symbol



Part Number and Electrical Parameter

Part Number	$I_{DRM}@V_{DRM}$		$V_{BR}@I_R$		$V_c@I_{pp}^{\text{①}}$		$C_o^{\text{②}}$	$C_o^{\text{③}}$
	μA	V	V	mA	V	A	pF	pF
	MAX		MIN		MAX		MAX	MAX
BV-SRV05-4	0.5	5.0	6.0	1	15	5	1.8	1.0

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

① Surge Waveform: 8/20 μ S. Pin 1,3,4,6 to Pin 2.

② Off-state capacitance is measured in $V_{DC}=0V$, $f=1MHz$. Pin 1,3,4,6 to Pin 2.

③ Off-state capacitance is measured in $V_{DC}=0V$, $f=1MHz$, any I/O to I/O.

Transient Voltage Suppressor

Part Numbering System

Mark

BV SRV05-4

(1) (2)

(1) Bencent Transient Voltage Suppressor

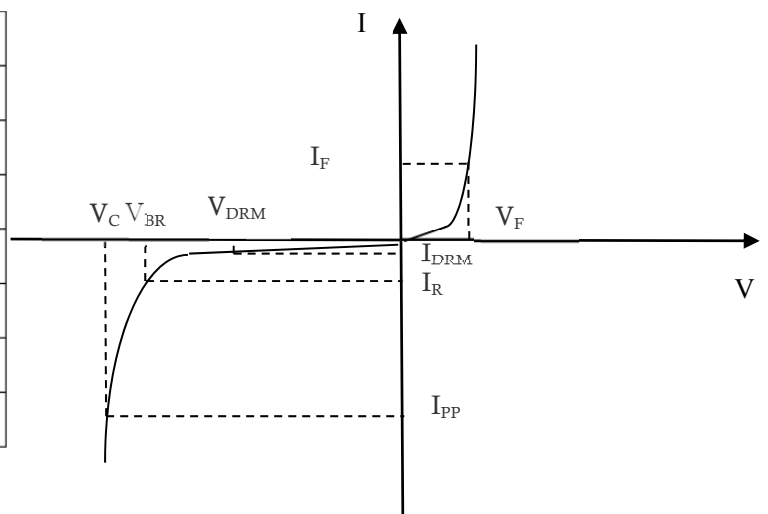
(2) Series: SRV05-4 etc.



V05: Part Number

V-I Curve

Parameters	Definition
V_C	Clamping Voltage
I_{PP}	Surge Waveform 8/20 μ 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



Thermal Considerations

symbol	Parameter	Value	Unit
T_j	Operating Junction Temperature Range	-55 to +150	$^{\circ}\text{C}$
T_s	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$

Environmental Characteristics

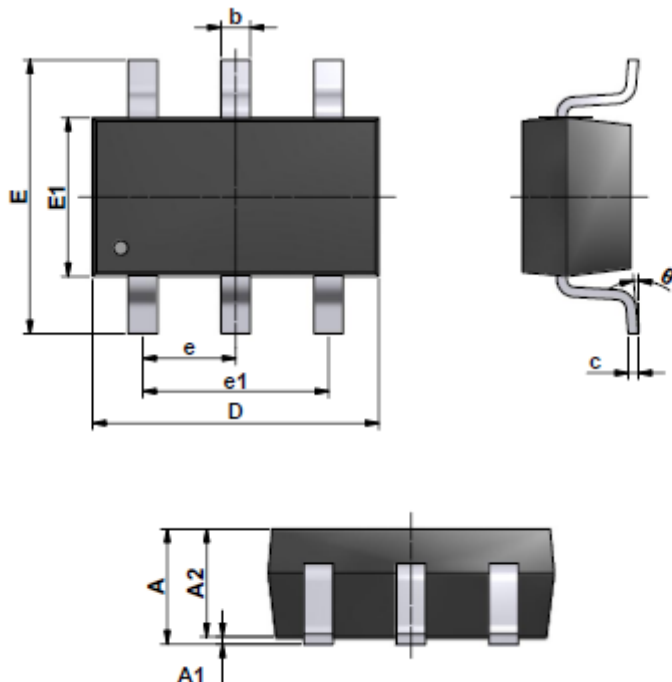
Testing items	Technical standards
High Temperature Reverse Bias Test	Temperature: $150 \pm 5^{\circ}\text{C}$ Bias= $80\%V_{DRM}$. Time: 168H
High Temperature Storage Test	Temperature: 150°C Time: 168H
High-low Temperature Cycle test	Temperature: From -55°C to 125°C Dwell time : 30min, 100cycles
High Temperature & High Humidity Test	Temperature: 85°C Humidity: 85% Time: 168H
Pressure cooker Test	Temperature: 121°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

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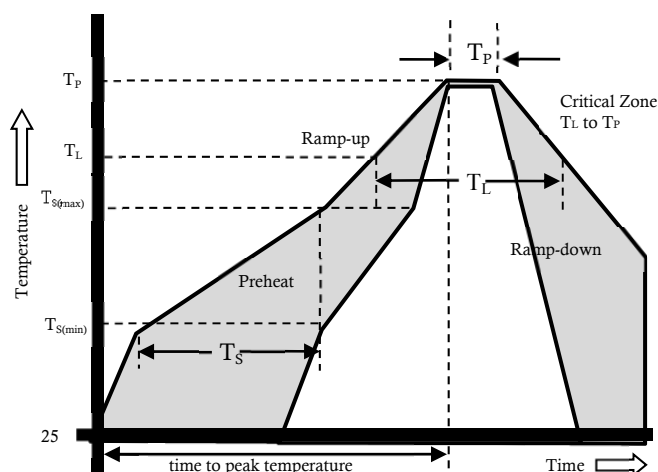
Product Dimensions



REF	mm	inch
A	1.25(max)	0.0492(max)
A1	0.000-0.150	0.0000-0.0059
A2	1.000-1.200	0.0394-0.0472
D	2.820-3.026	0.1110-0.1191
E	2.600-3.000	0.1024-0.1181
E1	1.500-1.750	0.0591-0.0689
e	0.900-1.000	0.0354-0.0394
e1	1.800-2.000	0.0709-0.0787
b	0.300-0.500	0.0118-0.0197
c	0.100(min)	0.0039(min)

Reflow Profile

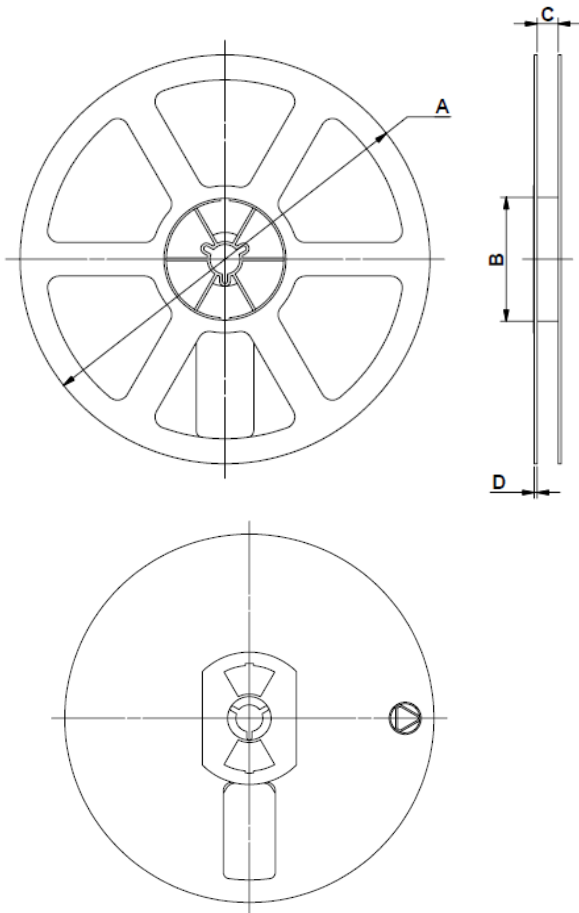
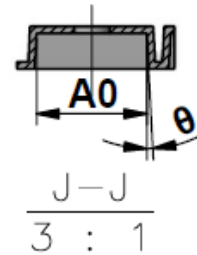
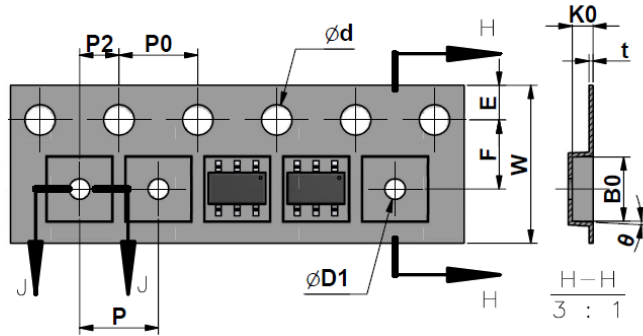
Reflow Condition		Pb-Free assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (Min to Max)	60 – 180 secs
Average ramp up rate (Liquid) T _{amp} (T _L) to peak		3°C/s Max
T _S (max) to T _L - Ramp-up Rate		3°C/s Max
Reflow	- Temperature (T _L) (Liquid)	217°C
	- Temperature (T _L)	60 – 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



Transient Voltage Suppressor

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Package Reel Information



REF	mm	inch
A0	3.26±0.20	0.128±0.008
B0	3.30±0.20	0.130±0.008
t	0.20±0.02	0.008±0.001
K0	1.05±0.05	0.041±0.002
d	1.55±0.10	0.061±0.004
P	4.00±0.10	0.157±0.004
P0	4.00±0.10	0.157±0.004
P2	2.00±0.05	0.079±0.002
E	1.75±0.10	0.069±0.004
F	3.5±0.05	0.138±0.002
W	8+0.30/-0.10	0.315+0.012/-0.004
A	178±1.0	7.008±0.039
B	54.5REF	2.146REF
C	9.4±1.5	0.370±0.059
D	1.5±0.3	0.059±0.012

OUTLINE	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)	CARTON SIZE(mm)		
				L	W	H
TAPING	3000	90,000	178	390	370	220