BV-SRV05-4

Order Code:BV-SRV05-4

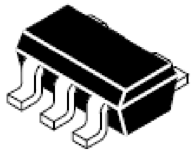
Transient Voltage Suppressor

Version:A1 2016-01-18

Features

- Small SOT23-6L Packaging
- Low leakage currentof 0.5uA(MAX) at 5V
- IEC61000-4-2(ESD)±15KV(air), ±10KV(contact)
- Moisture sensitivity level:level 1

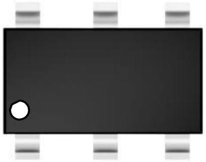
Exterior



Application information

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

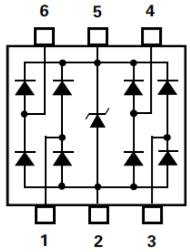
Package （Top View）



Agency Approvals

ICON	Description
ROHS	Compliance with 2011/65/EU
HF	Compliance withIEC61249-2-21:2003

Schematic symbol



Part Number and Electrical Parameter

Part Number	I_{DRM}@V_{DRM}		V_{BR}@I_R		V_C@I_{PP}①		C_O②	C_O③
	uA	V	V	mA	V	A	pF	pF
	MAX		MIN		MAX		MAX	MAX
BV-SRV05-4	0.5	5.0	6.0	1.0	15	5	1.8	1.0

AbsolutemaximumratingsmeasuredatT=25ºCRH=45%-75%(unlessotherwisenoted).

① SurgeWaveform:8/20us,Pin1,3,4,6to Pin2;

② Off-state capacitance is measured in V_{BR}=0V ,f=1MHz,Pin1,3,4,6toPin2;

③ Off-state capacitance is measured in V_{BR}=0V ,f=1MHz,anyI/O– I/O;

Part Number System

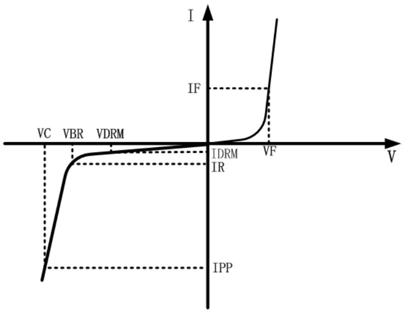
BV SRV05-4
(1) （2）
(1)Bencent TVS
(2)Series:SRV05-4 etc

Mark

V05:Part Number

V-I Curve

Parameters	Definition
V_C	Clamping voltage
I_{pp}	Peak pulse current
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	Paramter	Value	Unit
T_J	Operating Junction Temperature Range	-55 to +150	℃
T_S	Storage Temperature Range	-55 to +150	℃

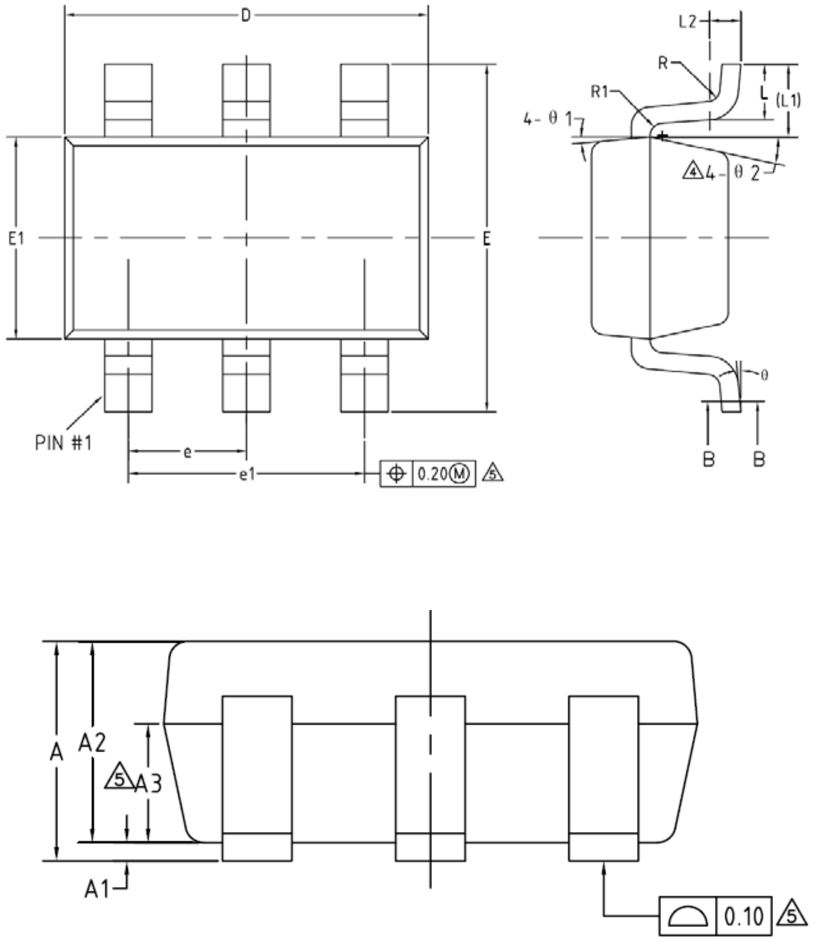
Environmental Characteristics

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature:150±3℃,Bias=80%V_{DRM} Time:168H
High Temperature Life Test	Temperature:150℃ Time:168H
High-low Temperature Cycle Test	Temperature: From -40℃ to125℃ Dwell time: 30min, 100 cycles
High Temperature &High Humidity Test	Temperature: 85℃Humidity:85% Test time:168H
Pressure Cooker Test	Temperature: 121℃, 2atm. Humidity:100% Test time: 168H
Resistance of Soldering Heat	Temperature: 260±5℃ Time of dip soldering: 10s, 3times

Note: The above testing items can be specified by customers by contacting Bencent service

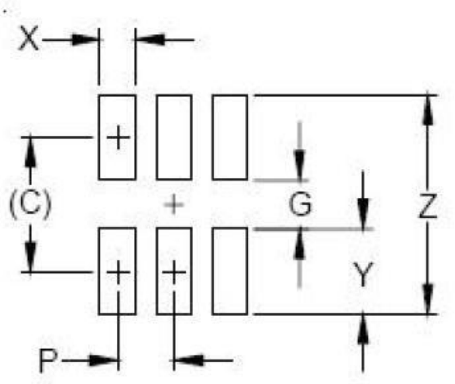
Product Dimensions

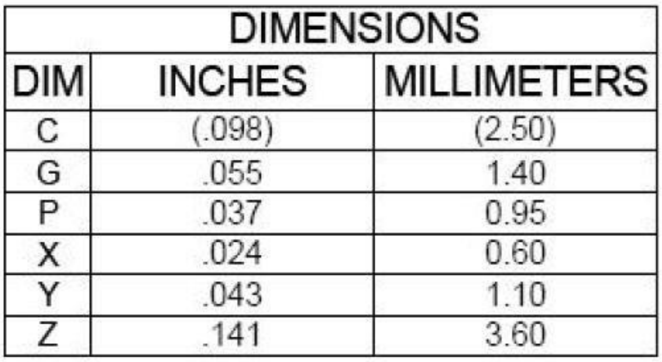
SOT23-6L



Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	--	--	1.250
A1	0.000	--	0.150
A2	1.000	1.100	1.200
A3	0.600	0.650	0.700
b	0.360	--	0.500
b1	0.360	0.380	0.450
c	0.140	--	0.200
c1	0.140	0.150	0.160
D	2.826	2.926	3.026
E	2.600	2.800	3.000
E1	1.526	1.626	1.726
e	0.900	0.950	1.000
e1	1.800	1.900	2.000
L	0.350	0.450	0.600
L1	0.590REF		
L2	0.250BSC		
R	0.100	--	--
R1	0.100	--	0.200
θ	0°	--	8°
θ1	3°	5°	7°
θ2	6°	--	14°

Recommended Soldering Pad



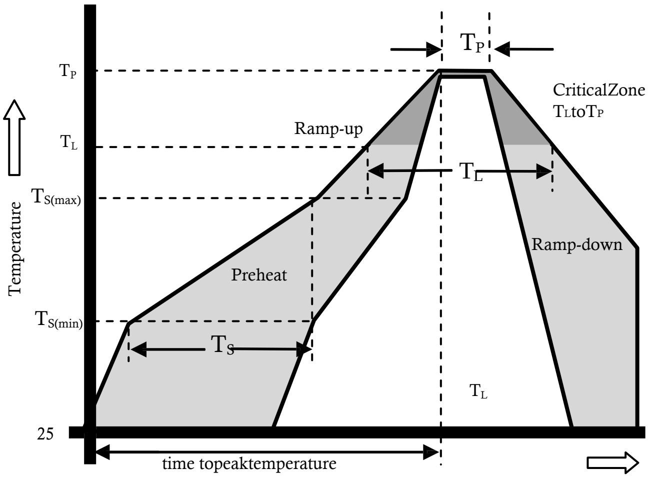


DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.098)	(2.50)
G	.055	1.40
P	.037	0.95
X	.024	0.60
Y	.043	1.10
Z	.141	3.60

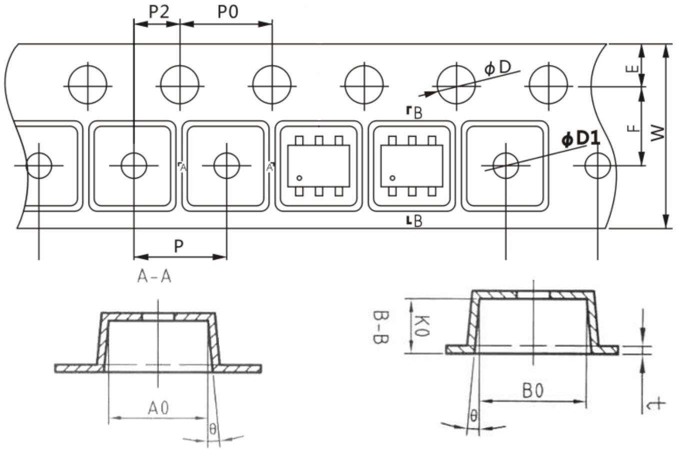
Transient Voltage Suppressor

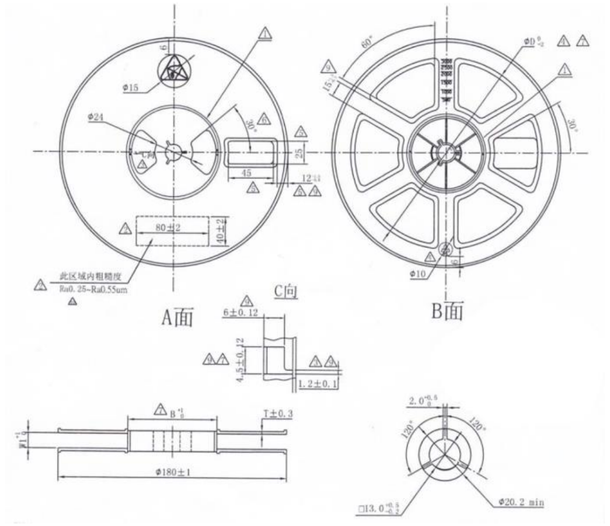
Reflow Profile

ReflowCondition		Pb-FreeAssembly
Pre Heat	TemperatureMin.	+150°C
	TemperatureMax.	+200°C
	Time(MintoMax)	60–180secs.
Averageramp uprate(Liquidus Temp(T$_L$)topeak)		3°C/sec.Max.
Ts(max)toTL-Ramp-upRate		3°C/sec.Max.
Reflow	-Temperature(T$_L$) (Liquidus)	+217°C
	-Temperature(T$_L$)	60–150secs.
PeakTemp(T$_P$)		+(260+0/-5)°C
Timewithin5°CofactualPeakTemp (T$_P$)		8–15secs.
Ramp-downRate		6°C/sec.Max.
Time25°CtopeakTemp(T$_P$)		8 min.Max.
Do notexceed		+260°C



Package Reel Information





REF.	mm
E	1.75±0.10
F	3.5±0.05
P2	2.00±0.05
D	1.55±0.10
D1	1.05±0.05
P0	4.00±0.10
10P0	40.00±0.20

REF.	mm
W	8.00±0.10
P	4.00±0.10
A0	3.26±0.10
B0	3.30±0.10
K0	1.05±0.05
t	0.20±0.02
θ	3° ~5° TYP

REF.	mm
B	54. 4
W1	8. 6
T	1. 5
D	Φ154

OUTLINE	REEL (PCS)	PERCARTON (PCS)	CARTONSIZE(mm)		
			L	W	H
TAPING	3,000	90,000	390	370	220