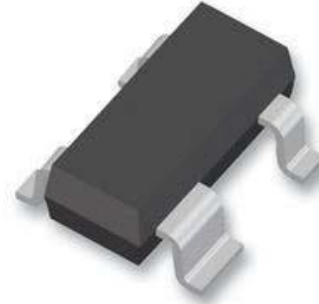
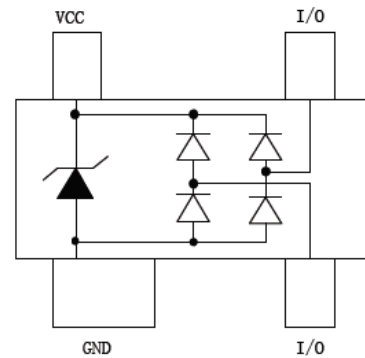



Features

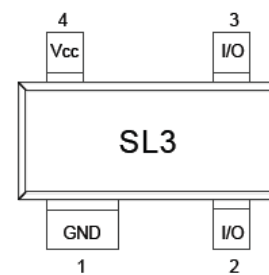
- IEC61000-4-2(ESD)±15KV(air), ±8KV(contact)
- IEC61000-4-5(Lightning) 5A (8/20μs)
- 125Watts peak pulse power per line (tp=8/20μs)
- Low leakage current
- Low capacitance :0.85pF(Typical)
- Moisture sensitivity level: level 1
- Small package: SOT-143

Exterior

SOT-143
Application information

- USB Power & Data Line Protection
- Ethernet 10BaseT
- I²C Bus Protection
- Video Line Protection
- T1/E1 secondary IC Side Protection
- ISDN S/T interface
- WAN/LAN Equipment

Package (Top View)

Agency Approvals

ICoN	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC 61249-2-21:2003
	Mean lead free

Schematic Symbol

Part Number and Electrical Parameter

Part Number	I _{DRM} @V _{DRM}		V _{BR} ^① @I _{BR}		V _C @I _{PP} ^②		V _C @I _{PP} ^②		C ₀ ^③	
	uA	V	V	mA	V	A	V	A	pF	
	MAX		MIN		MAX		MAX		TYP	MAX
BV-SR05	1.0	5.0	6.0	1.0	15.0	1.0	25.0	5.0	0.85	1.20

Absolute maximum rating 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;

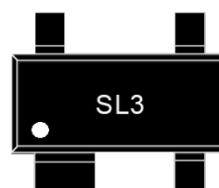
 ③ Off-state capacitance is measured in V_{BR}=0V, f=1MHz, any I/O-GND;

Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications

Transient Voltage Suppressor

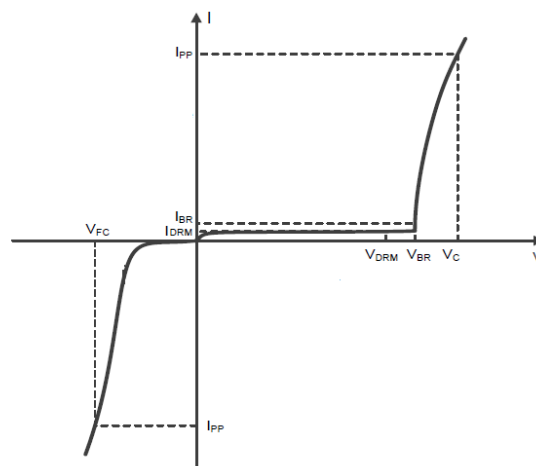
Version: A0 2016-03-14

Part Number System
BV SR05
(1) (2)
(1) Bencent TVS
(2) Series: SR05 etc.
Mark


SL3: Marking

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_{BR}	Test current
V_{FC}	Forward clamping voltage
P_{PP}	Peak Pulse Power Dissipation


Thermal Considerations

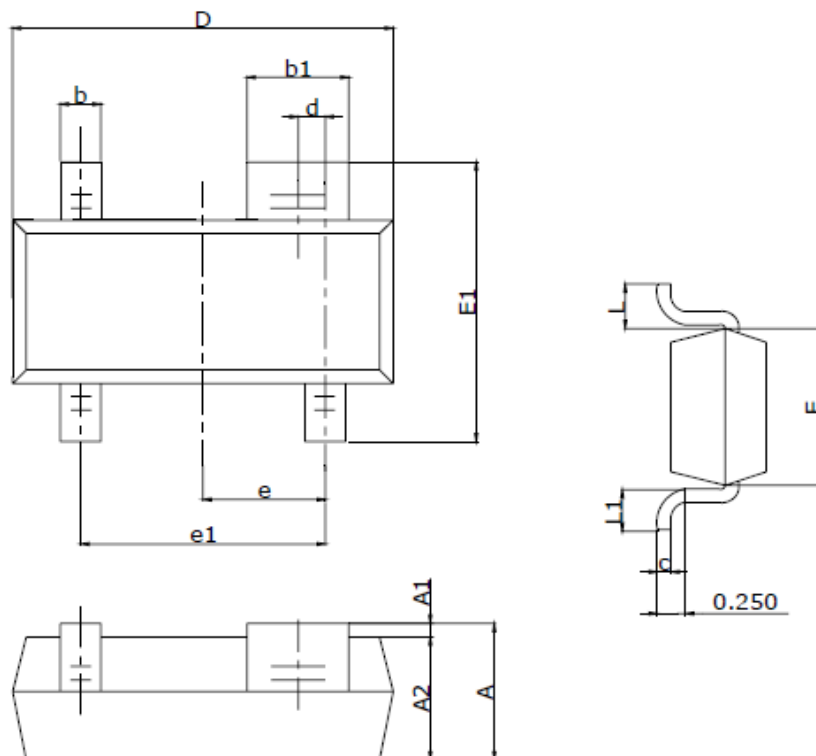
Symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-55 to +150	°C
T_S	Storage Temperature Range	-55 to +150	°C

Environmental Characteristics

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature: $150 \pm 3^\circ\text{C}$, Bias = $80\% V_{DRM}$ Time: 168H
High Temperature Life Test	Temperature: 150°C Time: 168H
High-low Temperature Cycle Test	Temperature: From -40°C to 125°C Dwell time: 30min, 100 cycles
High Temperature & High Humidity Test	Temperature: 85°C Humidity: 85% Test time: 168H
Pressure Cooker Test	Temperature: 121°C , 2atm. Humidity: 100% Test time: 24H
Resistance of Soldering Heat	Temperature: $260 \pm 5^\circ\text{C}$ Time of dip soldering: 10s, 3 times

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

Specifications are subject to change without notice.

SOT-143


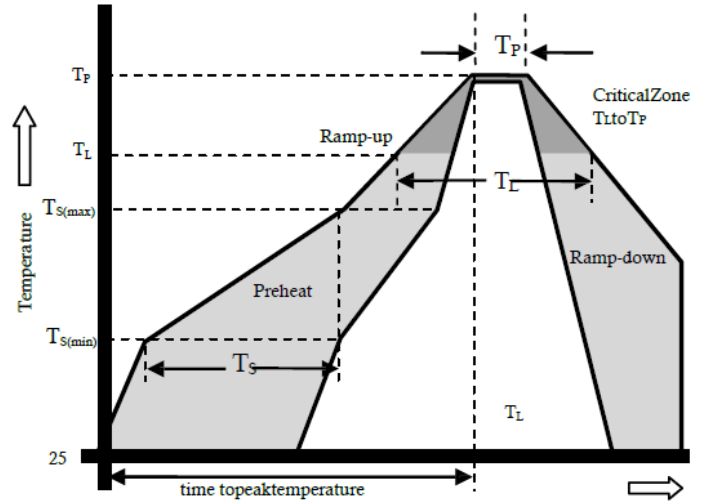
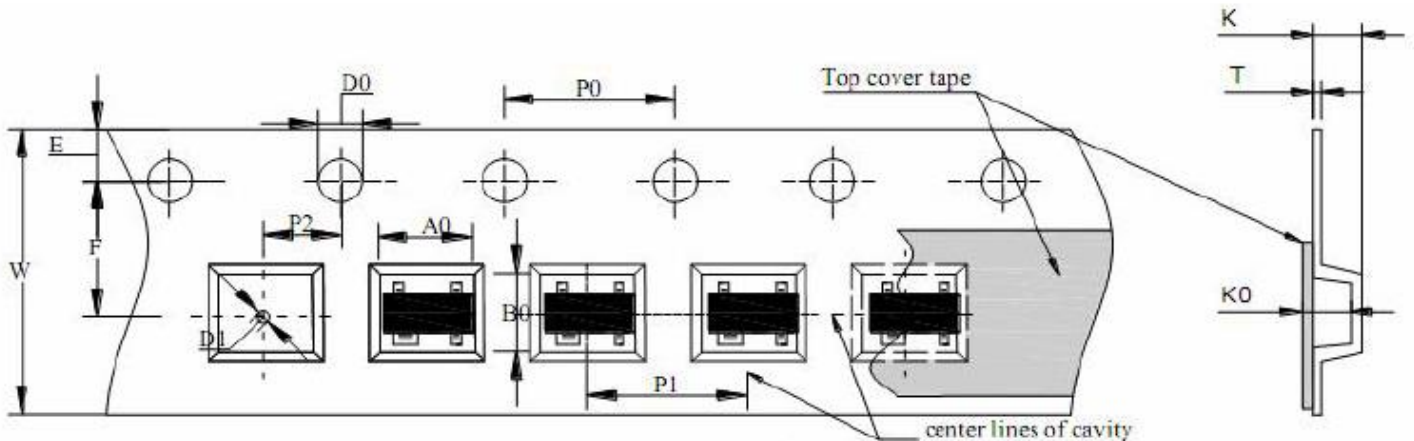
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
b1	0.75	0.90	0.030	0.035
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
d	0.20TYP		0.008TYP	
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.10
e	0.95TYP		0.037TYP	
e1	1.80	2.00	0.071	0.079
L	0.55REF		0.022REF	
L1	0.30	0.50	0.012	0.020

Transient Voltage Suppressor

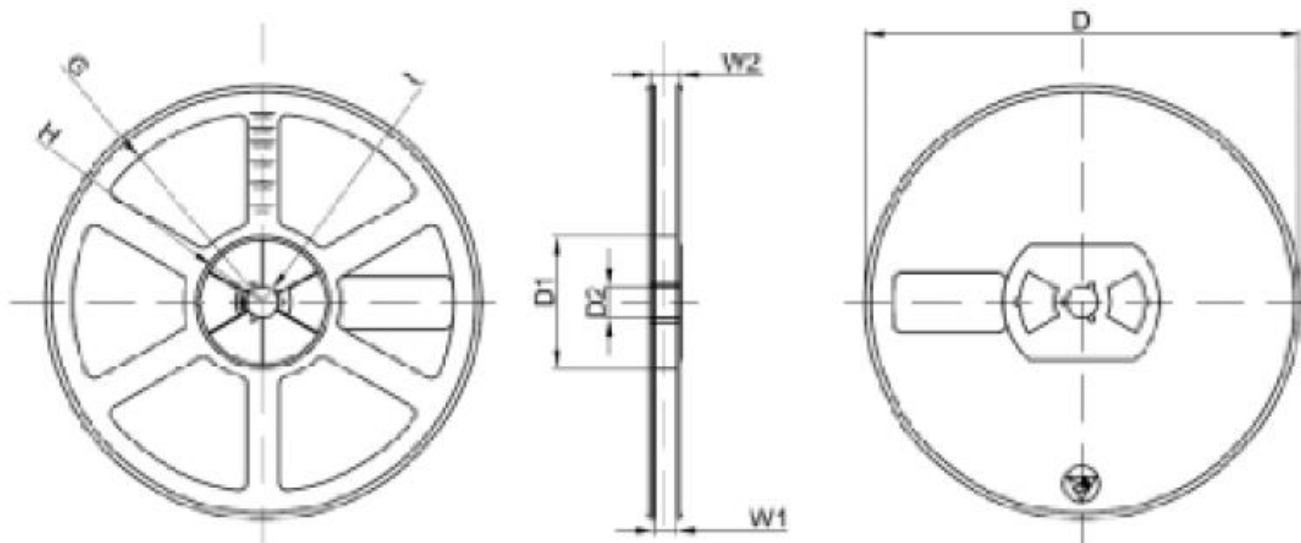
Version: A0 2016-03-14

Reflow Profile

Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min	150°C
	Temperature Max	200°C
	Time (Min to Max)	20 – 80 secs
Average ramp up rate (Liquid)		3°C/s Max.
Temperature (T _L) to peak		3°C/s Max.
T _S (Max) to T _I -Ramp-up Rate		3°C/s Max.
Reflow	-Temperature (T _L)(Liquid)	217°C
	-Temperature (T _I)	60 – 150 secs
Peak Temperature (T _P)		(260±0/-5)°C
Time within 5°C of actual Peak Temperature (T _P)		8– 15 secs
Ramp-down Rate		6°C/s Max.
Time 25°C to peak Temperature(T _P)		8 min Max
Do not exceed		260°C


Package Reel Information


Symbol	P0	P1	D0	D1	E	F	K	T	W
Dimensions In Millimeters	4.00	4.00	1.50	1.00	1.75	3.50	1.00	0.20	8.00



Symbol	D	D1	D2	G	H	I	W1	W2
Dimensions In Millimeters	Φ 178.00	54.40	13.00	R78.00	R25.80	R8.50	9.50	12.30
Tolerance	+2	+1	+1	-1	+1	+1	+1	+1

Outline	Reel (pcs)	Per Carton (pcs)	Reel Diameters (mm)	Carton Size (mm)		
				L	W	H
Taping	3,000	90,000	178	390	370	220