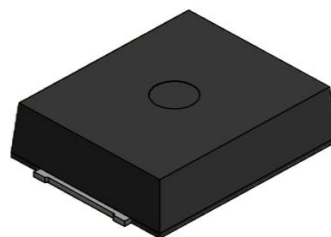


Features

- IEC 61000-4-2(ESD) $\pm 15\text{KV}(\text{air})$, $\pm 8\text{KV}(\text{contact})$
- Small package: SMK
- Quick response to surge voltage
- Low clamping voltage
- Moisture sensitivity level: Level 1
- Max surge capability: $3\text{KA}@90^\circ\text{C}$ 8/20 μs

Exterior



SMK

Application Information

- DC Port

Package (Top View)



Agency Approvals

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

Schematic Symbol



Part Numbering and Electrical Parameter

Part Number	$I_R@V_R$		$V_{BR}@I_t$			$V_c@I_{pp}^{①}$	
	μA	V	V	V	mA	V	A
	MAX		MIN	MAX		MAX	MIN
BV-SMKJ30A	10	30	33	37	10	55	3000

Absolute maximum ratings measured at $T = 25^\circ\text{C}$ RH = 45%-75% (unless otherwise noted).

① Surge Waveform: 8/20 $\mu\text{s}@90^\circ\text{C}$

Part Number System

BV SMKJ 30 A
 (1) (2) (3) (4)
 (1) Bencent TVS
 (2) SMK Package
 (3) $V_R=30\text{V}$
 (4) Uni-directional polarity

Mark



K30A: Part Number

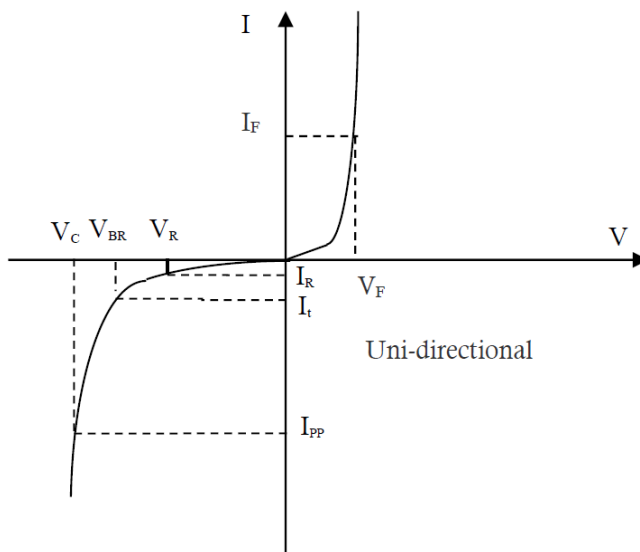
2012: December, 2020

Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications

V-I Curve

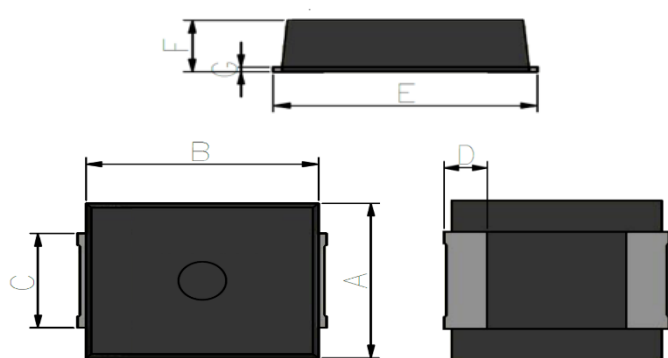
Parameters	Definition
V_F	Forward Voltage drop for UNI-directional
V_C	Clamping Voltage
I_{pp}	Surge Waveform 10/1000 μ s
V_R	Stand-off Voltage
V_{BR}	Breakdown Voltage
I_R	Reverse Leakage Current
I_t	Test Current



Thermal Considerations

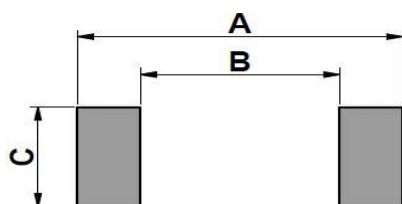
symbol	Parameter	Value	Unit
T_J	Operating Junction Temperature Range	-55 to +125	$^{\circ}\text{C}$
T_S	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$

Product Dimensions



REF	mm		Inch	
	Min	Max	Min	Max
A	7.95	8.55	0.313	0.337
B	9.7	10.3	0.382	0.406
C	4.8	5.2	0.189	0.205
D	1.7	2.3	0.067	0.091
E	10.4	10.8	0.409	0.425
F	1.65	2.85	0.065	0.112
G	0.15	0.3	0.006	0.012

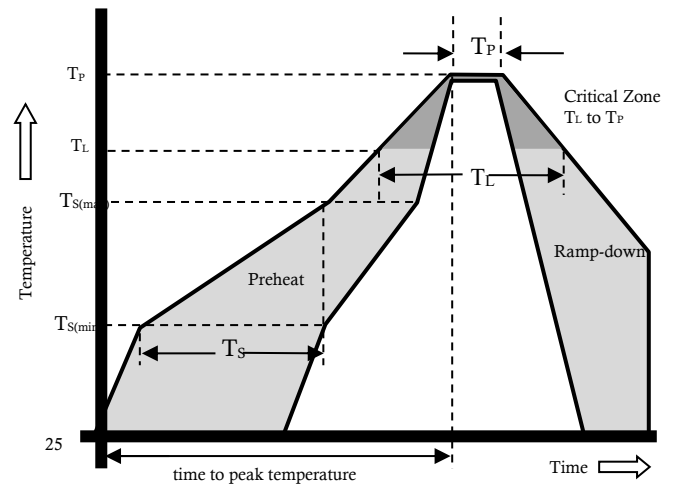
Recommended Soldering Pad



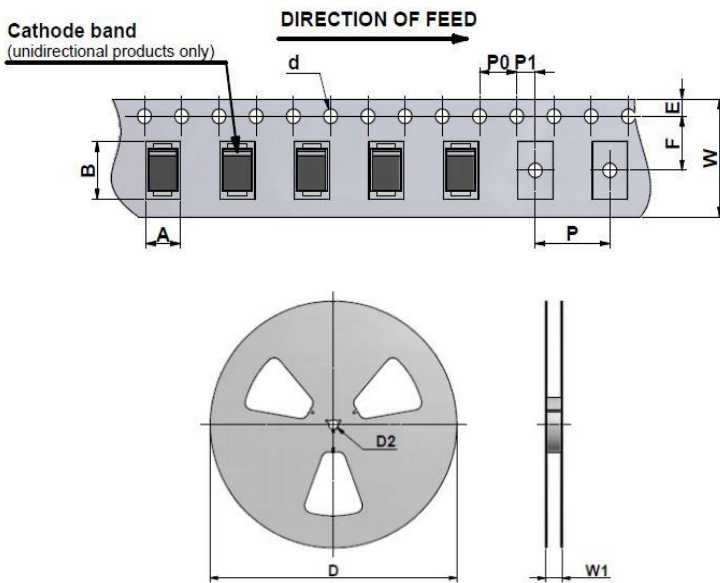
REF	mm	Inch
A	12.4	0.489
B	7.4	0.291
C	5.4	0.213

Reflow Profile

Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60 – 180 seconds
Average ramp up rate (Liquidus Temp (T _L) to peak)		3°C/second max
Ts(max) to T _L - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T _L) (Liquidus)	217°C
	- Temperature (T _L)	60 – 150 seconds
Peak Temp (T _P)		260+0/-5 °C
Time within 5°C of actual Peak Temp (T _P)		8-15 seconds
Ramp-down Rate		6°C/s max
Time 25°C to peak Temp (T _P)		8 min max.
Do not exceed		260°C



PackageReel Information



REF	mm		Inch	
	Min	Min	Min	Min
A	8.3	8.9	0.327	0.350
B	10.7	11.3	0.421	0.445
d	1.4	1.6	0.055	0.063
D	Φ 330		Φ 13	
D2	12.7	13.3	0.500	0.524
E	1.55	1.95	0.061	0.077
F	11.3	11.7	0.445	0.461
P	11.8	12.2	0.465	0.480
P0	3.8	4.2	0.150	0.165
P1	1.8	2.2	0.071	0.087
W	23.5	24.5	0.925	0.965
W1	27.5	28.5	1.083	1.122

Outline	Reel (pcs)	Per Carton (pcs)	Reel Diameters (mm)	Carton Size(mm)		
				L	W	H
Taping	1500	24,000	330	360	360	385