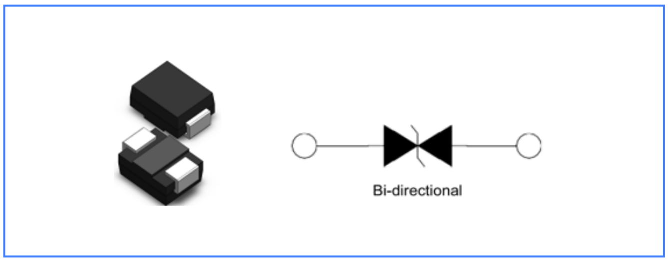
SMB30J58CA

Features

- Case: DO-214AA(SMB)
- Excellent clamping capability
- 3000 W peak pulse power capability with a 10/1000 µs waveform
- Typical failure mode is a short circuit condition for current events exceeding component rating
- Fast response time: typically less than 1.0ps from 0 Volts to VB min.
- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact).
- Max surge capability:4KV@10/700 µ s

Functional Diagram



Applications

- POE
- DC-48V

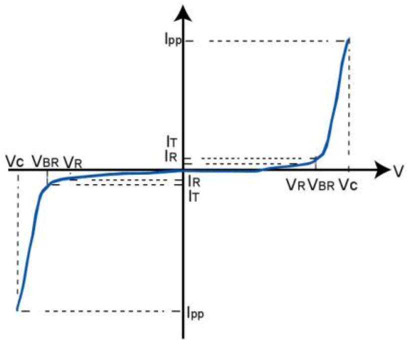
Maximum Ratings (TA=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25ºC by 10/1000μs Waveform	P_{PK}	3000	W
Surge capability@10/700 µ s	V_{PP}	4000	V
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical characteristics (TA = 25 °C unless otherwise noted)

Part Number (Bi)	MARKING	Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts)@I_T		Test Current I_T(mA)	Maximum Reverse Leakage I_R @ V_R(μA)	Maximum Peak Pulse Current Ipp(A)	Maximum Clamping Voltage V_C @I_{pp}(V)
			Min .V	Max .V				
SMB30J58CA	3DG	58	64.4	71.2	1	1	32.1	93.6

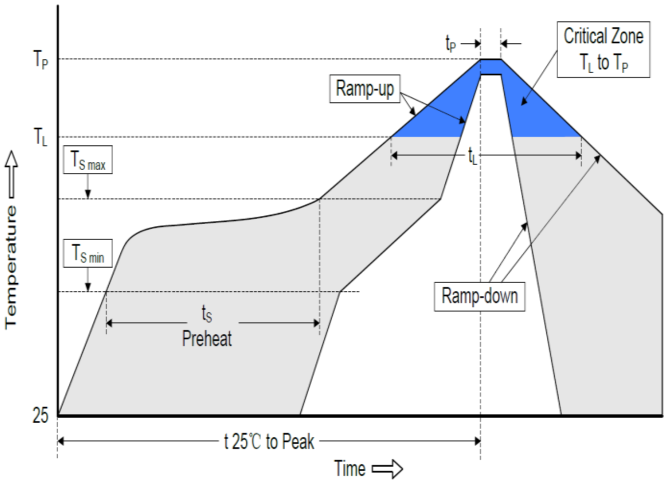
I-V Curve characteristics



Bi-directional

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @V $_{RWM}$
V_{BR}	Breakdown Voltage @ I_T(Test Current)

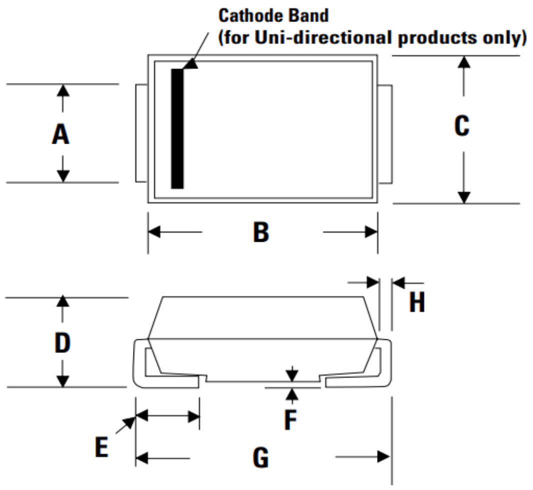
Soldering parameters



Profile Feature	Pb-Free Assembly
Average ramp-up rate (TL to TP)	3°C/second max.
Preheat -Temperature Min (TS min) -Temperature Max (TS max) -Time (min to max)(tS)	 150°C 200°C 60-180 seconds
TS max to TL -Ramp-up Rate	 3°C/second max.
Time maintained above: - Temperature (TL) - Time (tL)	 217°C 60-150 seconds
Peak Temperature (TP)	260°C
Time within 5°C of actual Peak Temperature (tP)	20-40 seconds
Ramp-down Rate	6°C /second max.
Time 25°C to Peak Temperature	8 minutes max.

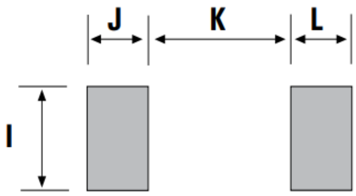
Package outline dimensions in millimeters

DO-214AA (SMB J-Bend)

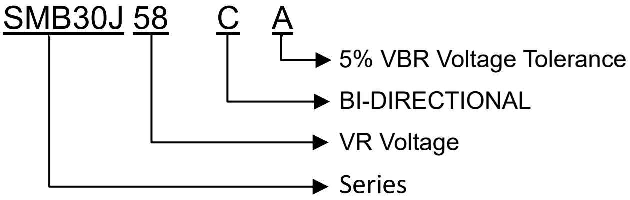


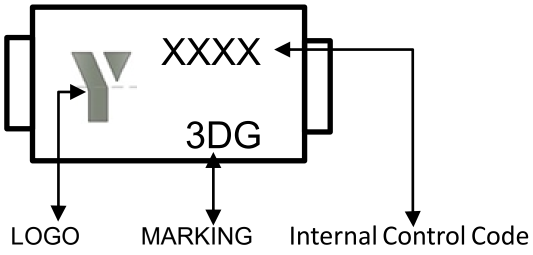
Dimensions	Millimeter	
	Min	Max
A	1.930	2.200
B	4.060	4.750
C	3.300	3.940
D	1.990	2.610
E	0.760	1.520
F	-	0.203
G	5.210	5.590
H	0.152	0.305
I	2.260	-
J	2.160	-
K	-	2.740
L	2.160	-

Mounting Pad Layout



Part number code & Marking code





Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.