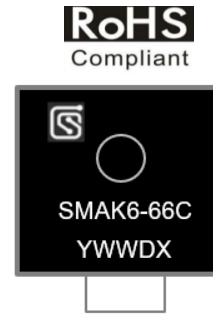
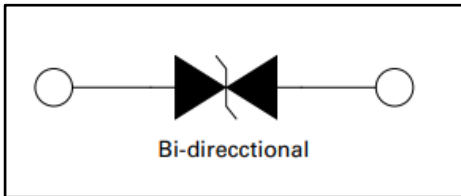


Features

- Patent pending package design
- Tube or tape and reel pack options available
- Low clamping and slope resistance.
- Meet MSL level1, per J-STD-020, LF maximum peak of 245°C
- Sharp breakdown voltage.
- High Power TVS designed in a surface mount and compact SMTO-218 package
- Meets MSL level 1, per J-STD-020, lead frame maximum peak of 260°C
- UL Recognized compound meeting flammability rating V-0



Function Diagram



Maximum Ratings and Thermal Characteristics (T _A = 25°C unless otherwise noted)			
Parameter	Symbol	Value	Unit
Operating Junction Temperature	T _J	-55 to 125	°C
Storage Temperature	T _{STG}	-55 to 150	°C
Current Rating ¹	I _{PP}	6	kA
Typical Thermal Resistance Junction to Lead	R _{θJL}	10	°C/W
Typical Thermal Resistance Junction to Ambient	R _{θJA}	50	°C/W

AGENCY	AGENCY FILE NUMBER
	Pending

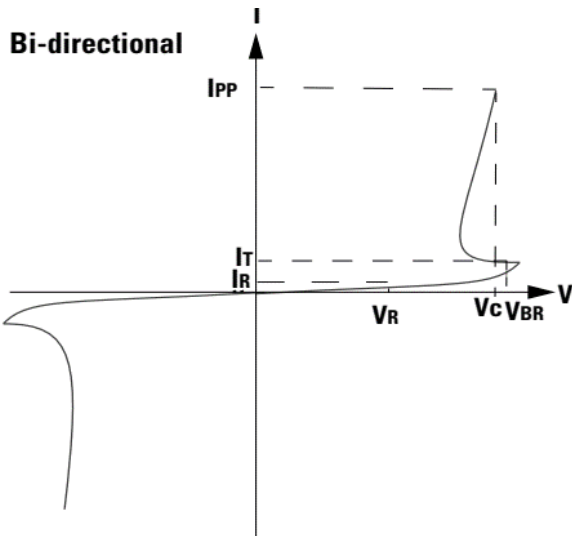
Notes:

1. Rated I_{PP} measured with 8/20µs pulse.

Characteristics (T = 25°C unless otherwise noted)

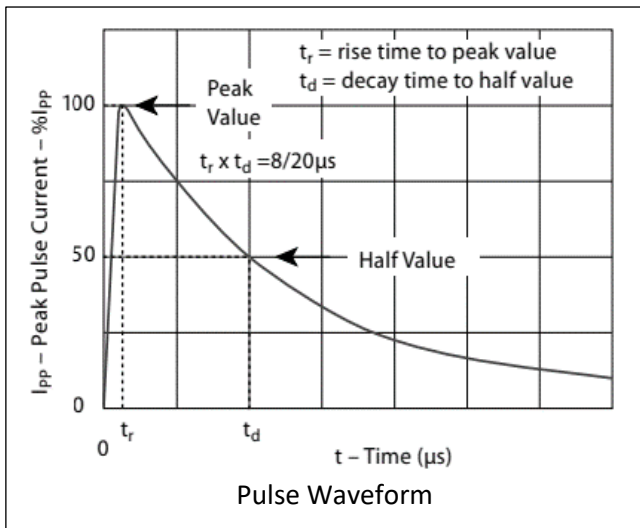
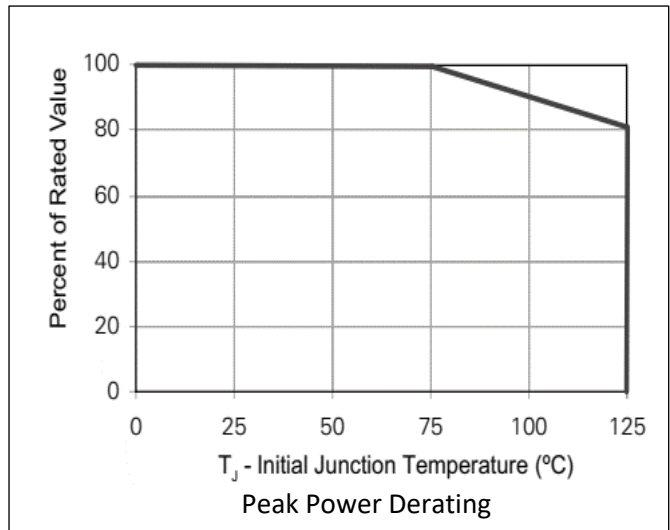
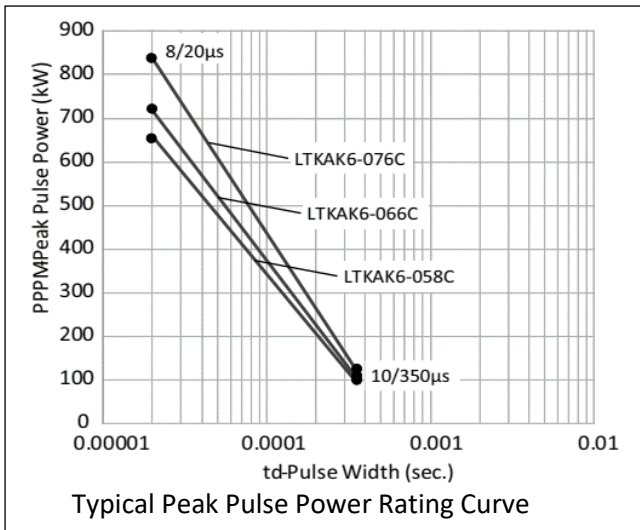
Part Numbers	Standoff Voltage (V _{SO}) (V)	Max. Reverse Leakage (I _R) @V _{SO} (μA)	Reverse Breakdown Voltage (V _{BR}) @ I _T		Test Current I _T (mA)	Max. Clamping Voltage V _C @ (I _{PP}) Volts	Max. Temp Coefficient of V _{BR} (%/°C)	Max. Capacitance 0V Bias 10kHz (nF)
			Min Volts	Max Volts				
SMAK6-058C	58	10	64	70	10	110	0.1	6.5
SMAK6-066C	66	10	72	80	10	120	0.1	5.5
SMAK6-076C	76	10	85	95	10	140	0.1	4.5

I-V Curve Characteristics



- P_{PPM} Peak Pulse Power Dissipation -- Max power dissipation
- V_R Stand-off Voltage -- Maximum voltage that can be applied to the TVS without operation
- V_{BR} Breakdown Voltage -- Maximum voltage that flows though the TVS at a specified test current (I_T)
- V_C Clamping Voltage -- Peak voltage measured across the TVS at a specified I_{PPM} (peak impulse current)
- I_R Reverse Leakage Current -- Current measured at V_R

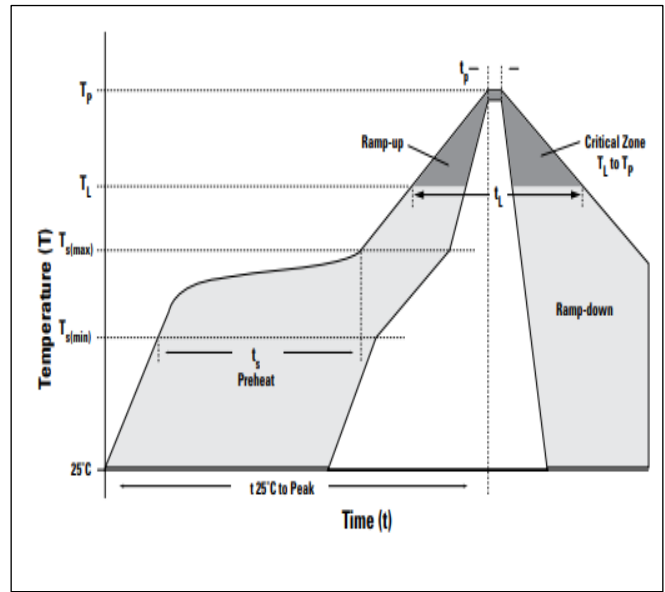
Ratings and Characteristic Curves (T = 25°C unless otherwise noted)



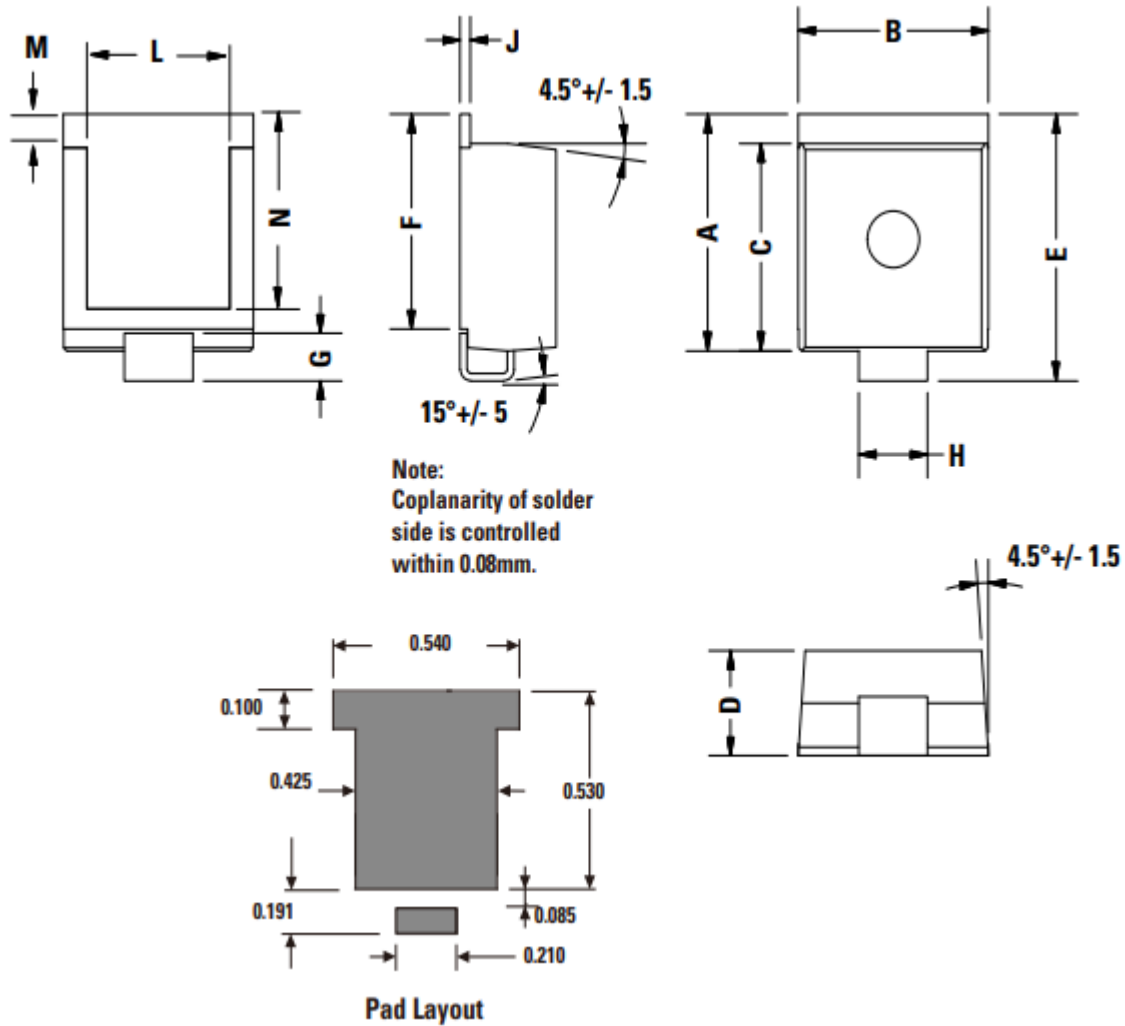
Soldering Parameters

Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_A) to peak)		3°C/second max
$T_{s(max)}$ to T_A - Ramp-up Rate		3°C/second max
Reflow	- Temperature (T_A) (Liquidus)	217°C
	- Time (min to max) (t_s)	60 – 150 seconds
Peak Temperature (T_p)		245 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		245°C

Soldering profile

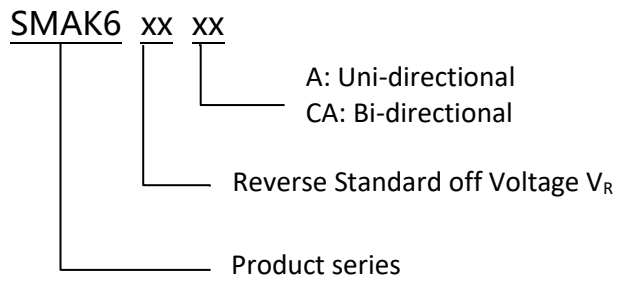


Dimensions

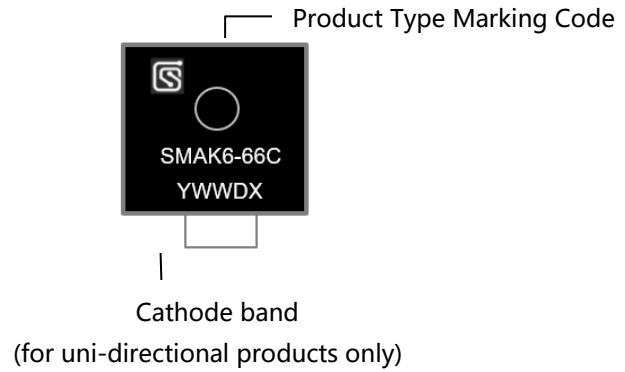


Dimension	Inches		Millimeters	
	Min	Max	Min	Min
A	0.621	0.655	15.78	16.63
B	0.529	0.594	13.43	15.29
C	0.544	0.561	13.83	14.24
D	0.273	0.285	6.94	7.24
E	0.702	0.737	17.82	18.72
F	0.567	0.587	14.40	14.90
G	0.087	0.126	2.20	3.20
H	0.193	0.222	4.89	5.65
J	0.028	0.033	0.72	0.85
L	0.400	0.440	10.17	11.17
M	0.073	0.112	1.85	2.85
N	0.510	0.533	12.95	13.55

Part Numbering



Part Marking



Packing

Part number	Package name	Small packing quantity	Packing method
SMAK6XXXX	SMTO-218	400	Tape & Reel

Revision history of Specification

Version	Change Items	Effective Date
1.0	Initial Release	15-Aug-2021