


Features

- Compact design having the Hi Power TVS in surface mount package
- Patent granted package design
- Tube or tape and reel pack options available
- Meet MSL level1, per J-STD-020, LF maximum peak of 260°C
- Halogen free and RoHS compliant
- UL Recognized compound meeting flammability rating V-0
- Meets MSL level 1, per J-STD-020, lead frame maximum peak of 260°C
- UL Recognized as an Isolated Loop Circuit Protector to UL 497B

RoHS
Compliant



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}	3	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

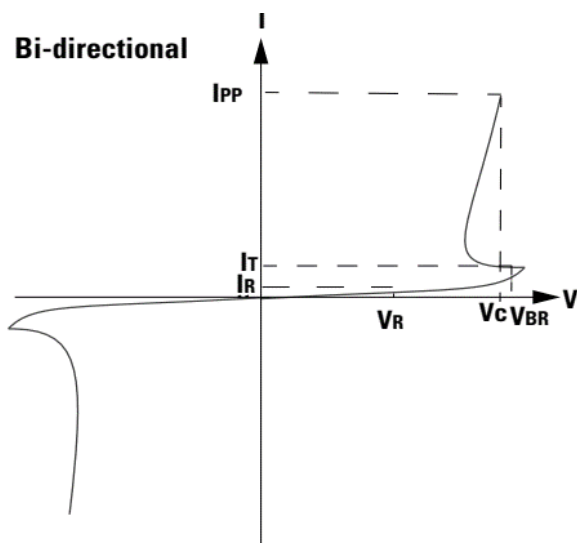
Notes:

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

Characteristics (T = 25°C unless otherwise noted)

Part Numbers	Standoff Voltage (VSO) Volts	Max. Reverse Leakage (IR) @VSO μ A	Reverse Breakdown Voltage (VBR) @ IT		Test Current IT μ A	Max. Clamping Voltage VCL @ Ipp	Max. Temp Coefficient OF VBR	Max. Capacitance 0V bias 10kHz
			Min Volts	Max Volts		VCL Volts	(%/OC)	(nF)
SMAK3-066C	66	10	75	83	40	120	0.1	6

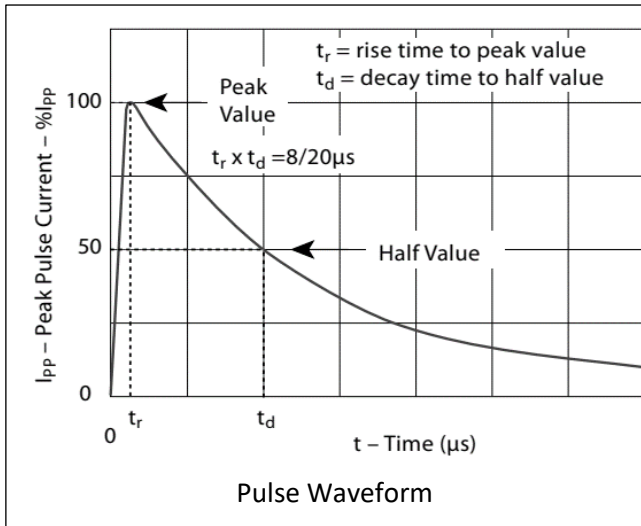
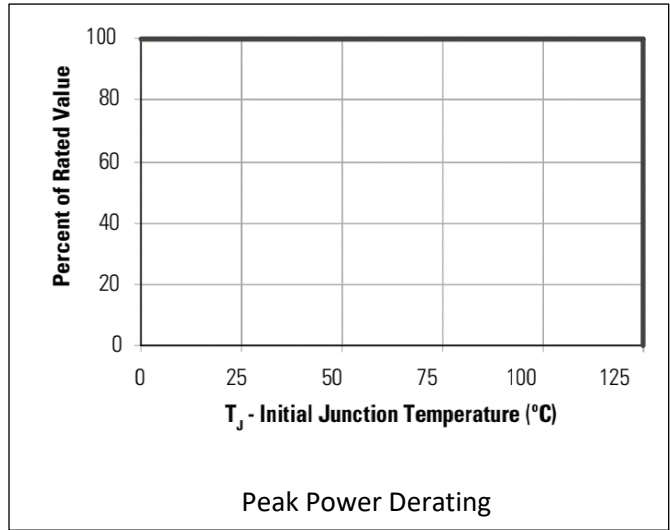
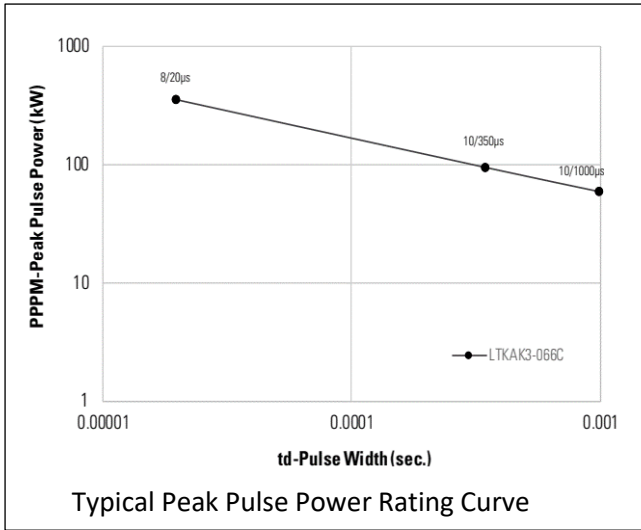
I-V Curve Characteristics



- 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



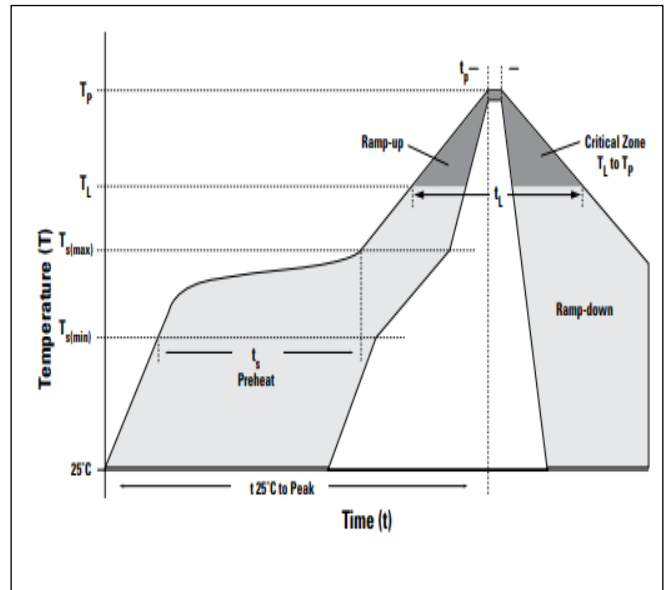
Ratings and Characteristic Curves (T = 25°C unless otherwise noted)



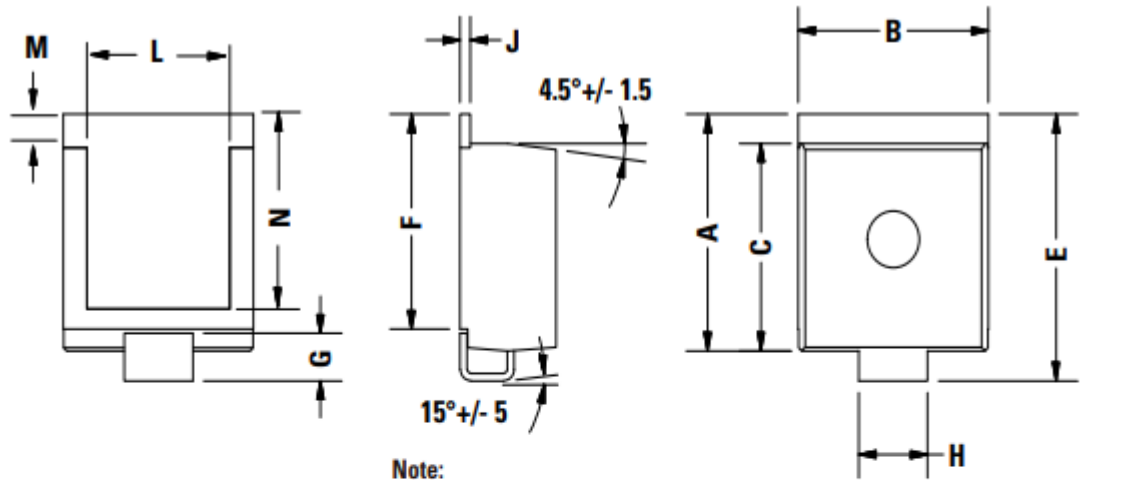
Soldering Parameters

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)		260 ^{+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		260°C

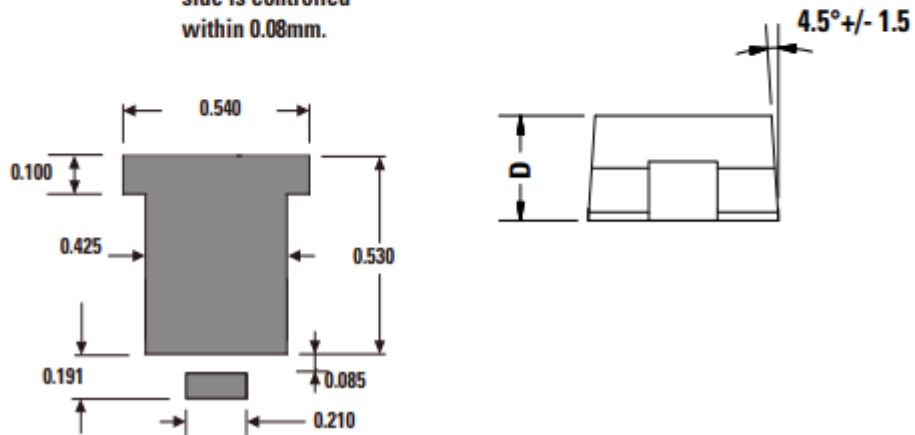
Soldering profile



Dimensions



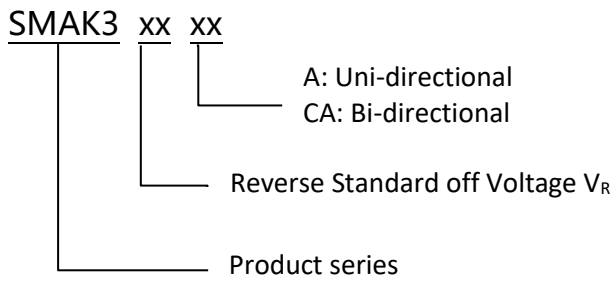
Note:
Coplanarity of solder side is controlled within 0.08mm.



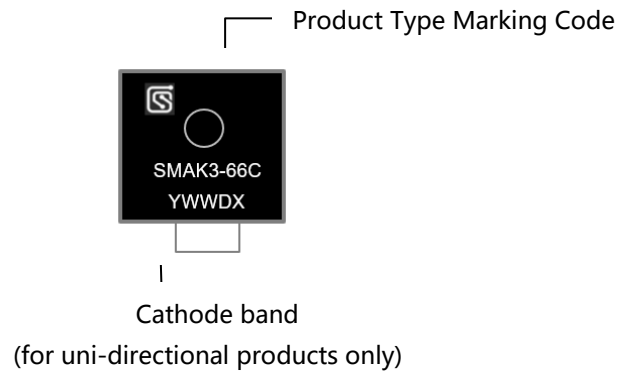
Pad Layout

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
SMAK3XXXX	SMTO-218	400	Tape & Reel

Revision history of Specification

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