

Feature

- Low Voltage Overshoot
- Low On-state Voltage
- Halogen Free And Rohs Compliant
- Fails Short Circuit When Surged In Excess Of Ratings



SMAJ


Applicable Global Standards

- TIA-968-A/B
- IEC61000-4-5 2nd
- ITU K.20/21/45 Enhanced Level
- ITU K.20/21/45 Basic Level
- GR 1089 Inter-Building
- YD/T 1082/993/950

Mechanical Characteristics

- Molded JEDEC SMAJ Package
- Flammability rating UL 94V-0
- Halogen Free

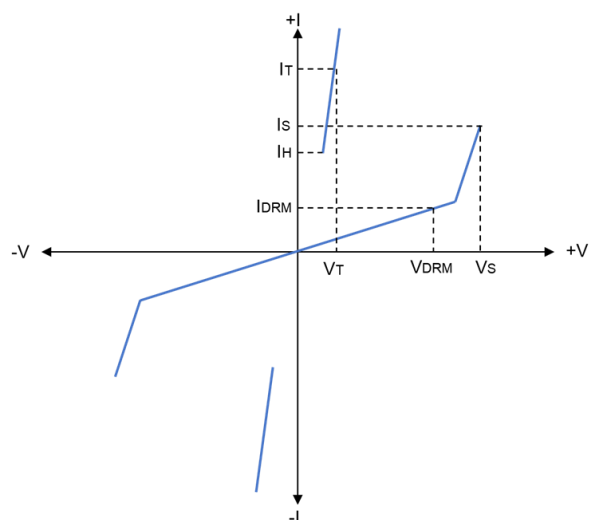

Electrical Characteristics ($T_{amb}=25^{\circ}C$)

Part No.	V_{DRM} @ $I_{DRM}=5\mu A$	V_S @100V/ μS	I_H	I_S	I_T	V_T @ $I_T=2.2A$	Capacitance @1MHz, 2V bias	
	V min	V max	mA,min	mA,max	A,max	V,max	min	max
P0800TA	6	25	50	800	2.2	4	50	150
P0300TA	25	40	50	800	2.2	4	50	150
P0640TA	58	77	50	800	2.2	4	100	160
P0720TA	65	88	50	800	2.2	4	100	150
P0900TA	75	98	50	800	2.2	4	95	140
P1100TA	90	130	50	800	2.2	4	75	115
P1300TA	120	160	50	800	2.2	4	65	100
P1500TA	140	180	50	800	2.2	4	60	90
P1800TA	170	220	50	800	2.2	4	50	90
P2300TA	190	240	50	800	2.2	4	50	80
P2600TA	220	260	50	800	2.2	4	50	75
P3100TA	275	300	50	800	2.2	4	45	70
P3500TA	320	350	50	800	2.2	4	45	65

Surge Ratings

Current waveform	2/10us	8/20us	10/160us	5/320us	10/1000us
Voltage waveform	2/10us	1.2/50us	10/160us	10/700us	10/1000us
I_{PP}	400A	300A	150A	100A	85A

I-V Curve Characteristics



Co Off-state Capacitance — typical capacitance measured in off state.

Is Switching Current — maximum current required to switch to on state

IDRM Leakage Current — maximum peak off-state current measured at V_{DRM}

Ih Holding Current — minimum current required to maintain on state

IPP Peak Pulse Current — maximum rated peak impulse current

Ir On-state Current — maximum rated continuous on-state current

Irsm Peak One-cycle Surge Current — maximum rated one-cycle AC current

Vs Switching Voltage — maximum voltage prior to switching to on state during 100 V/ μ s surge

VDRM Peak Off-state Voltage — maximum voltage that can be applied while maintaining off state

VT On-state Voltage — maximum voltage measured at rated on-state current

Ratings and Characteristics Curve (TA=25°C unless otherwise noted)

Fig 1. tr x td Pulse Waveform

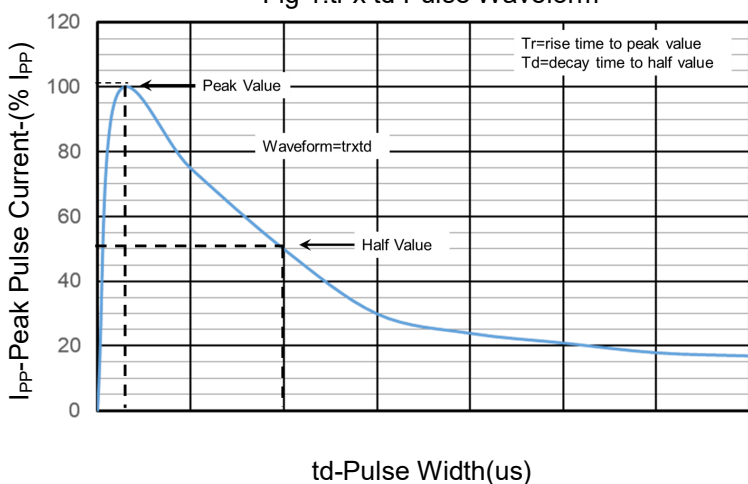


Fig 2. Normalized V_s Change vs. Junction Temperature

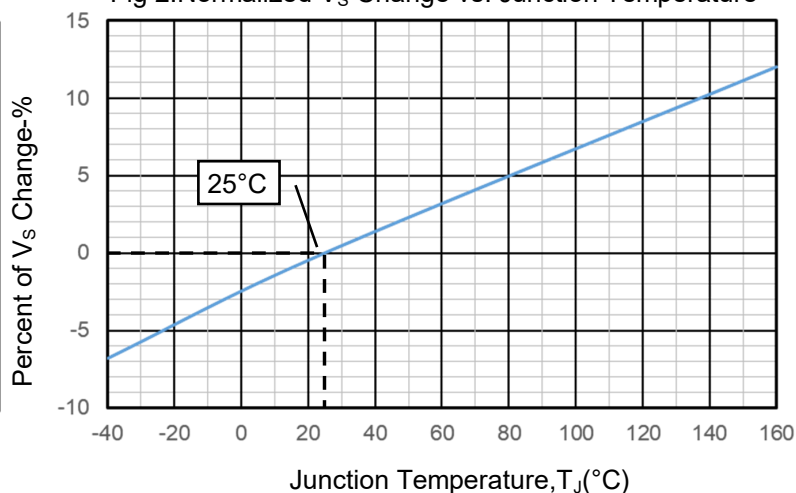
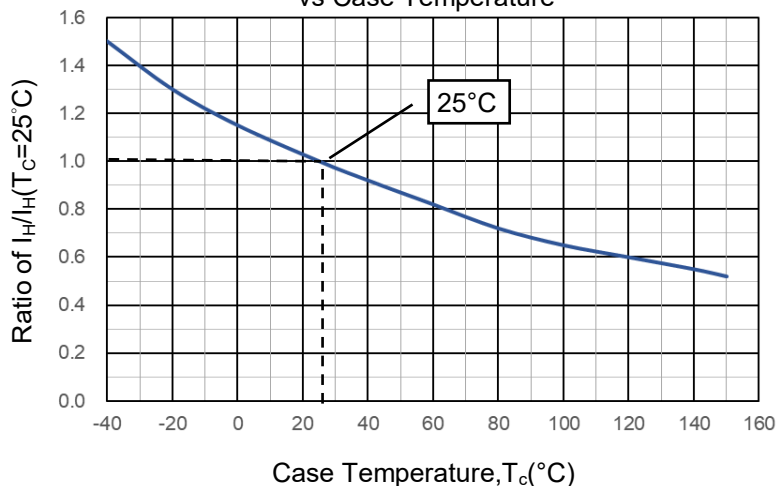
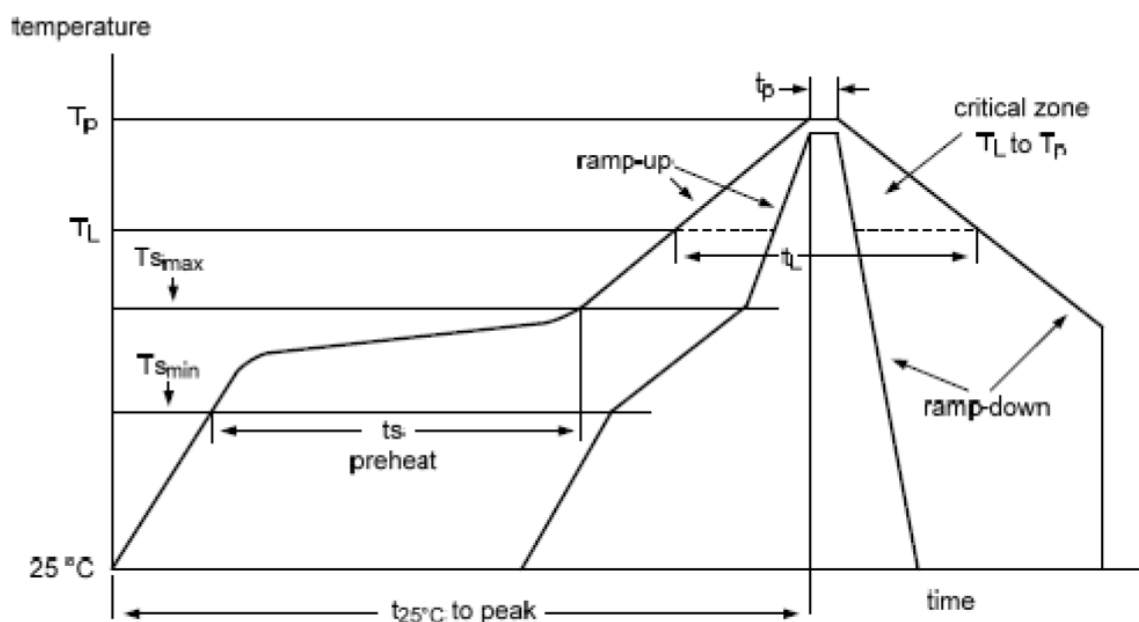


Fig 3. Normalized DC Holding Current vs Case Temperature

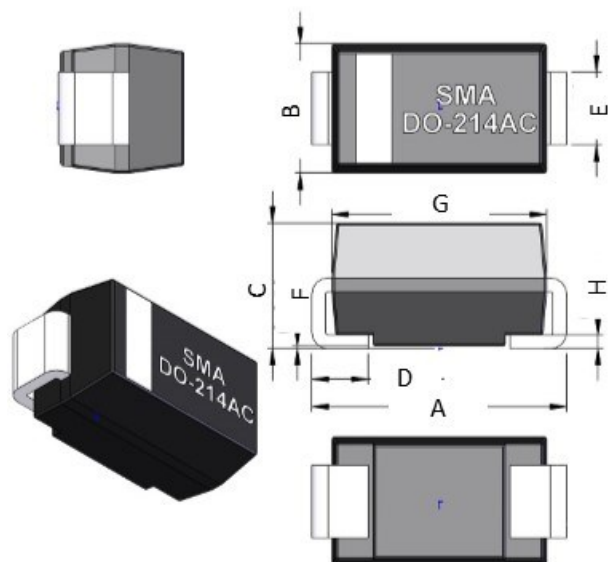


Soldering Parameters

Profile Feature	SnPb eutectic assembly	Pb-free assembly
Average ramp-up rate (T _{smax} to T _p)	3 °C/s maximum	3 °C/s maximum
Preheat		
Temperature minimum (T _{smin})	100 °C	150 °C
Temperature maximum (T _{smax})	150 °C	200 °C
Time (t _{smin} to t _{smax})	60 s to 120 s	60 s to 180 s
Time maintained above		
Temperature (T _L)	183 °C	217 °C
Time (t _L)	60 s to 150 s	60 s to 150 s
Peak/classification temperature (T)	235 °C	260 °C
Number of allowed reflow cycles	3	3
Time within 5 °C of actual peak temperature (t _p)	10 s to 30 s	20 s to 40 s
Ramp-down rate	6 °C/s maximum	6 °C/s maximum
Time 25 °C to peak temperature	6 minutes maximum	8 minutes maximum



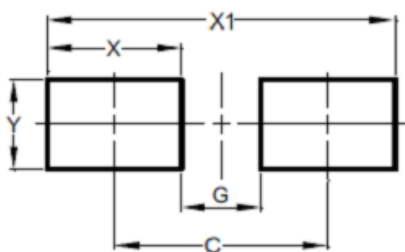
Dimensions and Packing



SMAJ		
Dim	Min	Max
A	4.75	5.25
B	2.55	2.85
C	2.0	2.5
D	0.85	1.55
E	1.35	1.65
F	-	0.4
G	4.25	4.55
H	0.15	0.3

Unit:mm

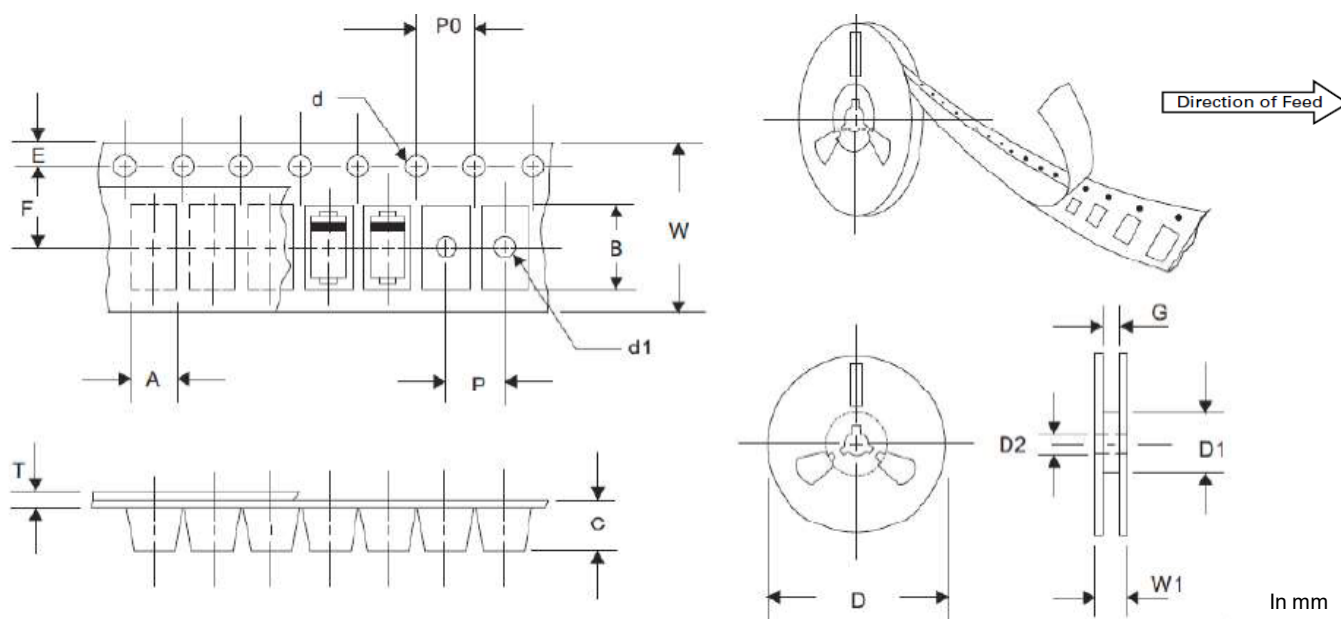
Suggest Pad Layout



Dimensions	Value
C	4.30
G	1.80
X	2.50
X1	6.80
Y	2.30

Unit:mm

Taping and Reel Information



In mm

W	A	B	C	d1	d	E	F	P	P0	T	D	D1	D2	G	W1
±0.3	±0.1	±0.1	±0.1	max	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.3	min	±0.2	min	min
12.00	2.79	5.33	2.36	1.50	1.50	1.75	5.50	4.00	4.00	0.30	330.0	72	13.00	12.40	18.00

Ordering Information

Part Number	Component Package	Quantity	Packaging Option	Packaging Specification
P Series TA	SMAJ	5,000pcs	Tape&reel-8mm tape/13"reel	EIA STD RS-481

FOR LANNER

History

Version	Date	File No.	Recording	Basis
A	29-May-2019	F11847L	New create	Market
B	10-Apr-2020	F11847L	Update company information	System