

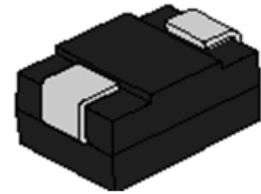


PxxxxSDT TSS

Rev.4.3

DESCRIPTION:

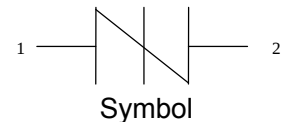
PxxxxSDT series are a type of semiconductor components. This can be used to replace the traditional GDT and TVS combination solution RS485, it has small dimension, low capacitance etc.



SMC

FEATURES:

- ✧ Glass passivated junction.
- ✧ Excellent capability of absorbing transient surge.
- ✧ Quick response to surge voltage (ns Level).
- ✧ Eliminates overvoltage caused by fast rising transients.
- ✧ Moisture sensitivity level: Level 1.
- ✧ Non degenerative.

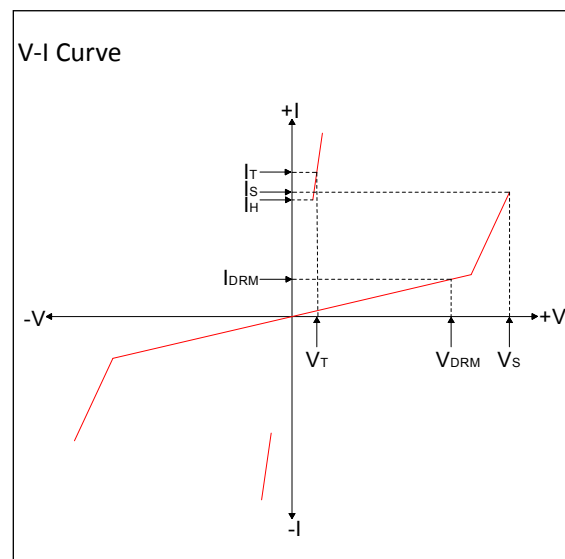


ABSOLUTE MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

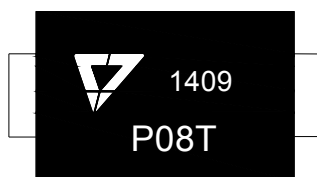
Parameter	Symbol	Value	Unit
Storage temperature range	T_{STG}	-60 to +150	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-40 to +125	$^{\circ}\text{C}$
Peak pulse current@1.2/50 μs -8/20 μs @2 Ω	I_{PP}	3000	A

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Symbol	Parameter
V_{DRM}	Peak off-state voltage
I_{DRM}	Off-state current
V_S	Switching voltage
I_S	Switching current
V_T	On-state voltage
I_T	On-state current
I_H	Holding current
C_o	Off-state capacitance



MARKING



P08T: Device Marking Code
1409: In ninth week, 2014

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$, continued)

Part Number	$I_{\text{DRM}}@V_{\text{DRM}}$		$V_S^{①}@I_S$		$V_T@I_T$		I_H	$C_o^{②}$	Marking
	μA	V	V	mA	V	A	mA	pF	
	max		max	max	max	max	min	typ	
P0080SDT	1	6	15	800	4	2.2	50	500	P08T
P0150SDT	1	15	25	800	4	2.2	50	250	P15T

① V_S is measured at 100KV/s

② Off-state capacitance is measured in $V_{\text{DC}}=2\text{V}$, $V_{\text{RMS}}=1\text{V}$, $f=1\text{MHz}$

ORDERING INFORMATION

P	008	0	S	DT
Series code P: SIDAC	Median voltage	0: Bi-direction	Package type: SMC	Surge ratings: 3000A

SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.2)
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_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L) (Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

FIG.1: $t_r \times t_d$ pulse waveform

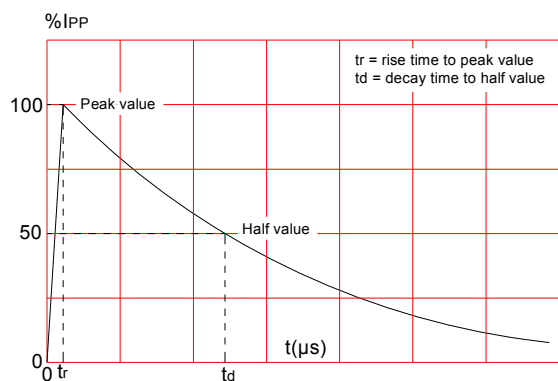


FIG.2: Reflow condition

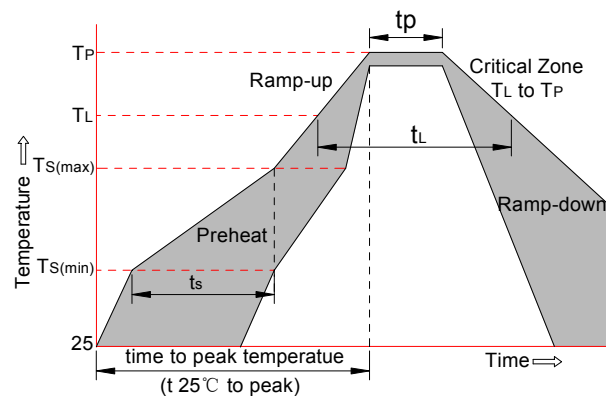


FIG.3: Normalized V_s change vs. junction temperature

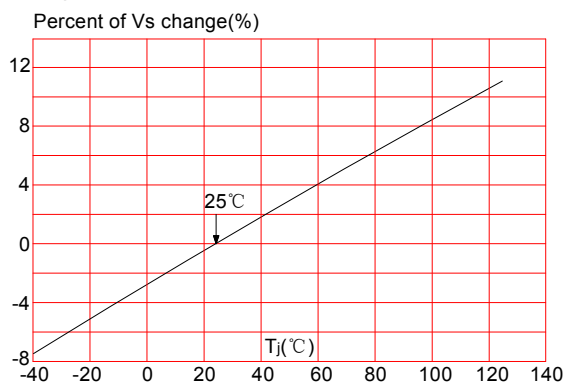
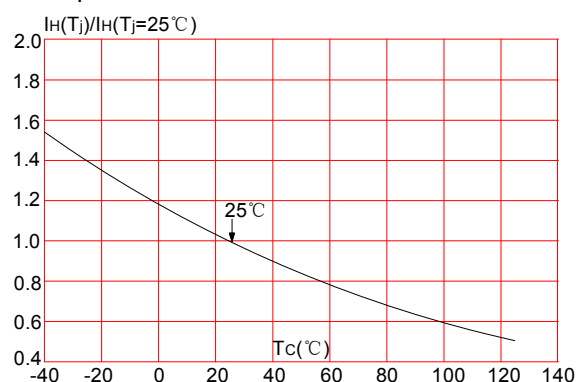
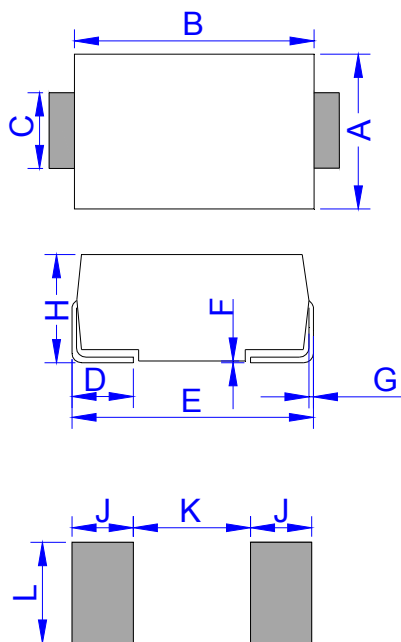


FIG.4: Normalized DC holding current vs. case temperature



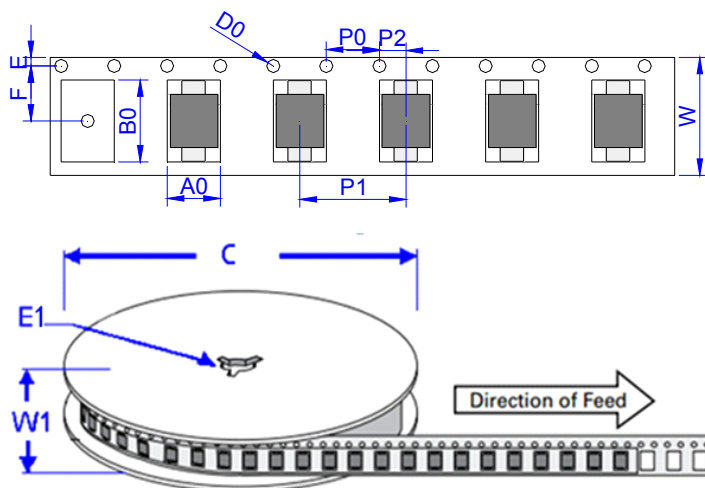
PACKAGE MECHANICAL DATA



DO-214AB (SMC)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.75	6.25	0.226	0.246
B	6.90	7.40	0.272	0.291
C	2.75	3.25	0.108	0.128
D	0.95	1.52	0.037	0.060
E	7.70	8.20	0.303	0.323
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.15	2.62	0.085	0.103
J	2.40		0.094	
K		4.20		0.165
L	3.30		0.130	

TAPE AND REEL SPECIFICATION-SMC



Ref.	Dimensions	
	Millimeters	Inches
A0	6.05 ± 0.3	0.238 ± 0.012
B0	8.31 ± 0.3	0.327 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	7.50 ± 0.2	0.295 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	8.00 ± 0.2	0.3145 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	16.0 ± 0.2	0.630 ± 0.008
W1	19.7 ± 2.0	0.776 ± 0.079

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
PxxxxSDT	0.244	3,000	48,000	13 inch reel pack

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