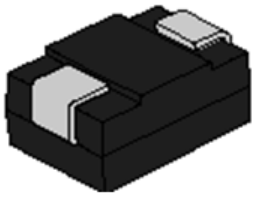
P4200SCT TSS

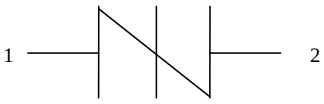
Rev.1.0

DESCRIPTION:

P4200SCT is a type of semiconductor component.
It can be used for digital SPC switch, gigabit IP router, equipment ground insulation, computer etc.
It can also be connected with MOVs to protect requirements of AC power. Compared with the traditional GDT and MOVs combination, it has lower capacitance, higher reliability etc.



SMC



Symbol

FEATURES:

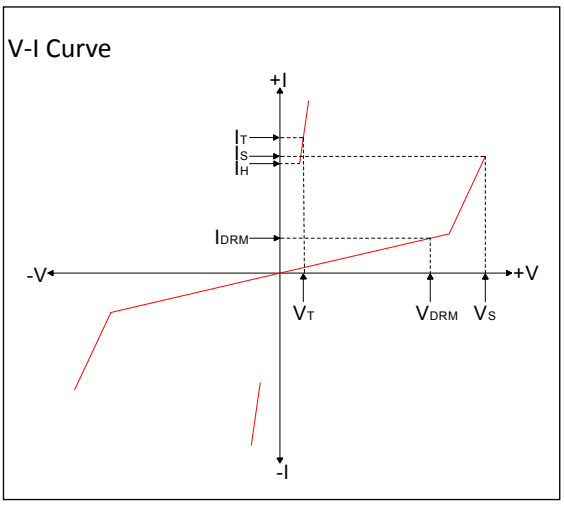
- Glass passivated junction.
- Excellent capability of absorbing transient surge.
- Quick response to surge voltage (ns Level).
- Eliminates overvoltage caused by fast rising transients.
- Moisture sensitivity level: Level 1.
- UL 497B item recognized. (File No.: E480698).
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact).
- Non degenerative.

ABSOLUTE MAXIMUM RATINGS (T_A=25℃, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{STG}	-60 to +150	℃
Operating junction temperature range	T_J	-40 to +125	℃
Repetitive peak pulse current@8/20μs	I_{PP}	2000	A

ELECTRICAL CHARACTERISTICS (T_A=25℃)

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

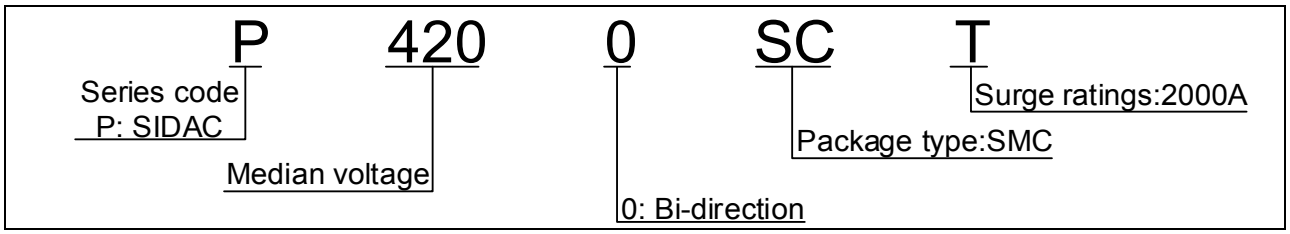
P42SCT: Device Marking Code
2009: In ninth week, 2020

ELECTRICAL CHARACTERISTICS (T_A=25℃, continued)

Part Number	I_{DRM}@V_{DRM}		V_S①@I_S		V_T@I_T		I_{BO}	I_H	C_O②	I_{PP}③	Marking
	μA	V	V	mA	V	A	mA	mA	pF	A	
	max		max	max	max	max	typ	max	typ	min	
P4200SCT	5	380	550	800	4	2.2	8	15	200	2000	P42SCT

① V_S is measured at 100kV/s
② Off-state capacitance is measured in V_{DC}=2V, V_{RMS}=1V, f=1MHz
③ Peak pulse current at 8/20μs

ORDERING INFORMATION



SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.2)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L)to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L) (Liquidus)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG.1: tr × td pulse waveform

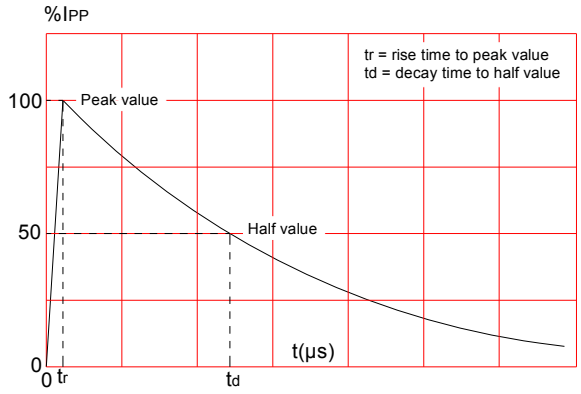


FIG.2: Reflow condition

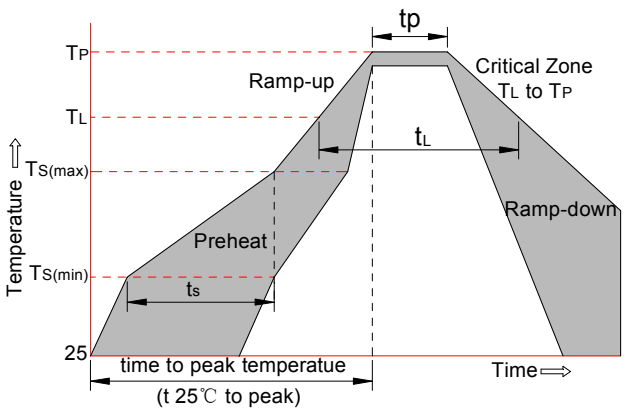


FIG.3: Normalized Vs change vs. junction temperature

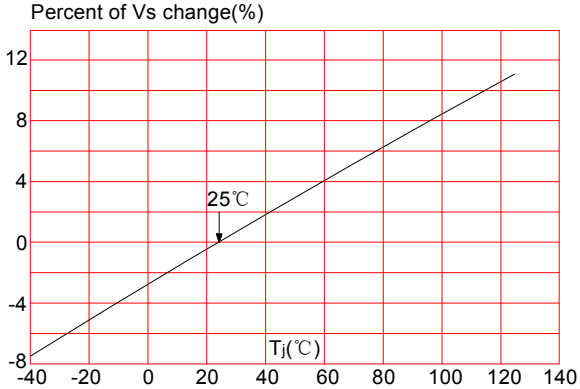
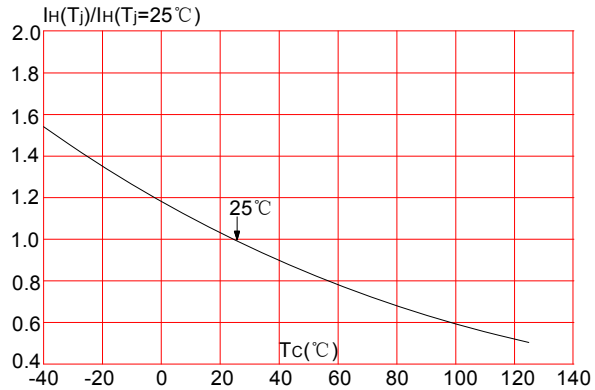
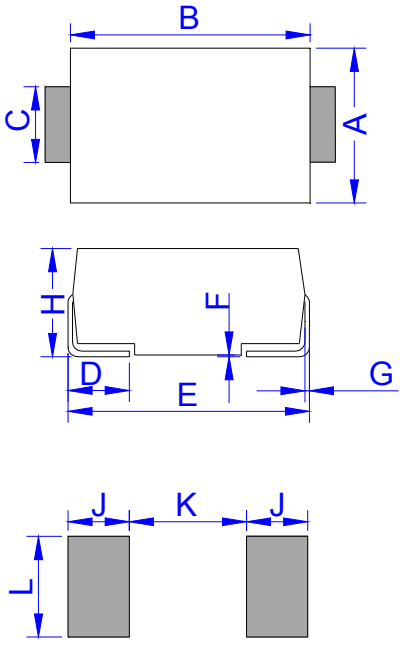


FIG.4: Normalized DC holding current vs. case temperature



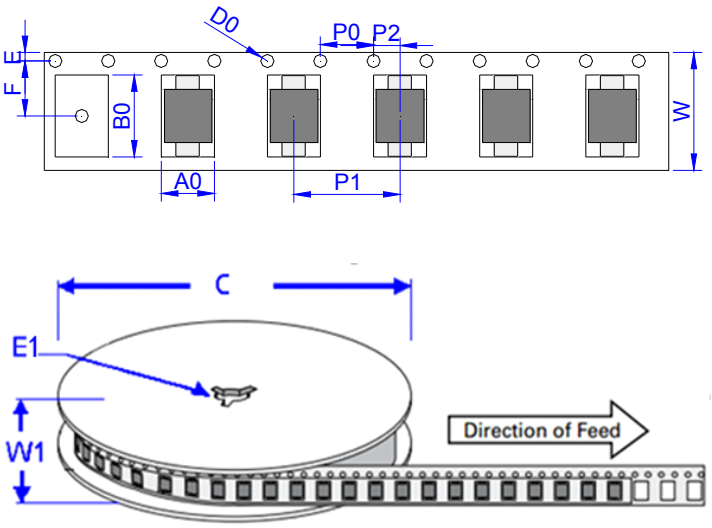
PACKAGE MECHANICAL DATA



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
P4200SCT	0.244	3,000	48,000	13 inch reel pack

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