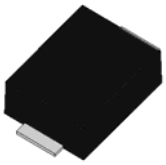
P1800SE-G TSS

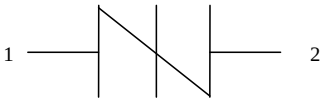
Rev.1.1

DESCRIPTION:

P1800SE-G 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 reliablility etc.



SMBF



Symbol

FEATURES:

- Low profile package.
- Low on-state voltage.
- 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.

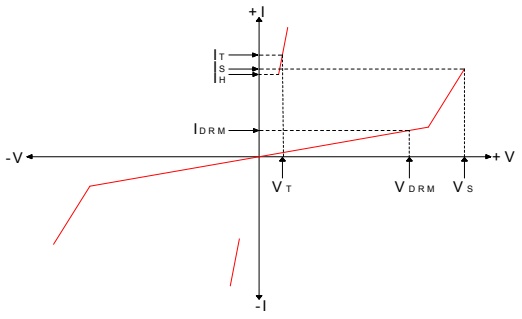
ABSOLUTE MAXIMUM RATINGS(T_A=25ºC, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{STG}	-60 to +150	℃
Operating junction temperature range	T_J	-40 to +125	℃
Peak pulse voltage at 1.2/50μs-8/20μs@12Ω waveform	V_{PP}	10000	V
Maximum leakage current connected with MOV561~102		5.0 @1500VAC	mA

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

V-I Curve



MARKING

P18VE : Device Marking Code
1932: the 32th week, 2019

ELECTRICAL CHARACTERISTICS(T_A=25℃, continued)

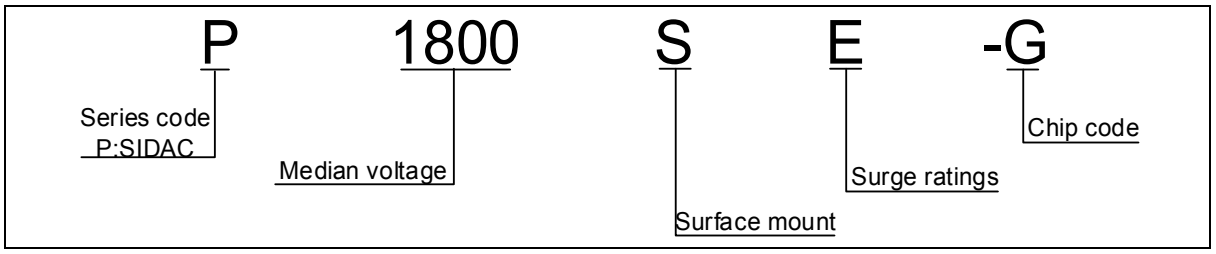
Part Number	I_{DRM}@V_{DRM}		V_S①@I_S		V_T@I_T		I_H	C_O②	Marking
	μA	V	V	mA	V	A	mA	pF	
	max		max	max	max	max	typ.	max	
P1800SE-G	5	1800	2800	800	4	2.2	10	50	P18VE

① Vs is measured at 100KV/s
② Off-state capacitance is measured in V_{DC}=2V,V_{RMS}=1V, f=1MHz

SURGE RATINGS

	1.2/50μs-8/20μs (R_i=12Ω)	10/700μs	8/20us	10/1000μs
E	10KV	10KV	800A	200A

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

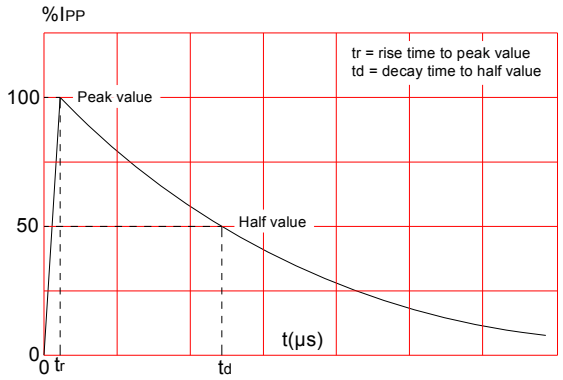


FIG.2: Reflow condition

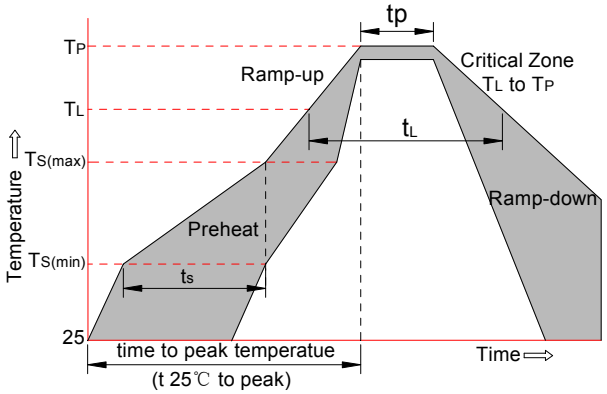


FIG.3: Normalized Vs change vs. junction temperature

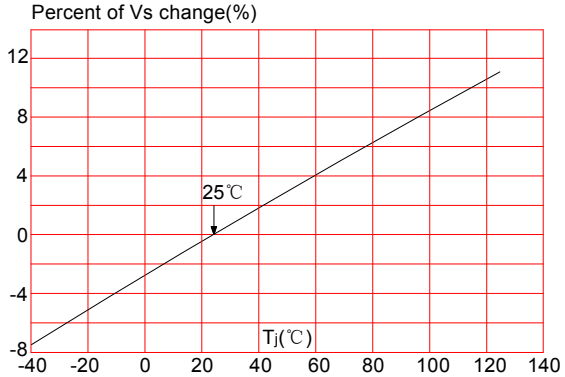
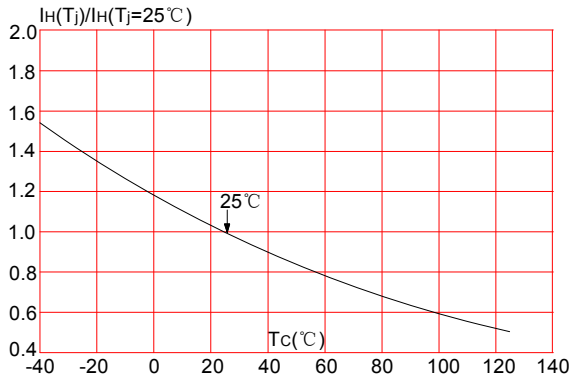
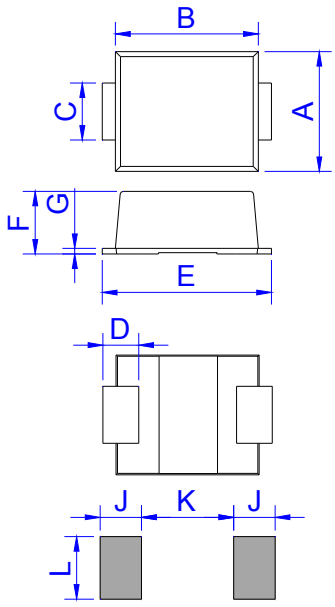


FIG.4: Normalized DC holding current vs. case temperature



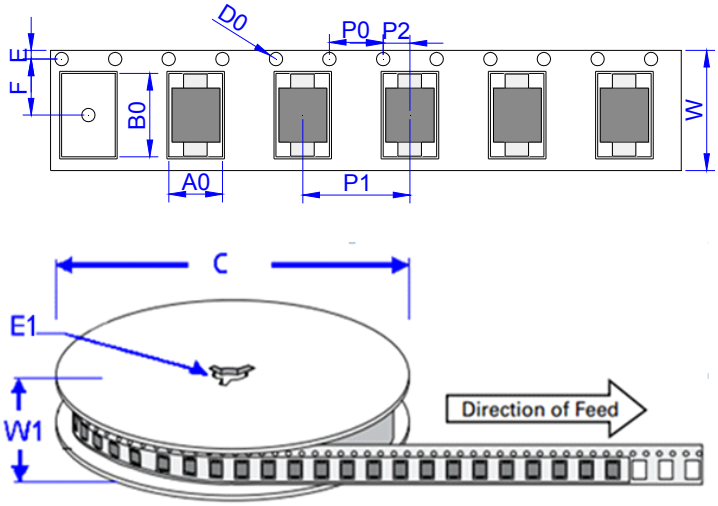
PACKAGE MECHANICAL DATA



SMBF

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.90	4.50	0.154	0.177
B	4.65	5.15	0.183	0.203
C	1.85	2.15	0.073	0.085
D	0.60		0.024	
E	5.60	6.00	0.220	0.236
F	2.05	2.35	0.081	0.093
G	0.12	0.28	0.005	0.011
J	2.00		0.079	
K		3.20		0.126
L	2.30		0.091	

TAPE AND REEL SPECIFICATION-SMBF



Ref.	Dimensions	
	Millimeters	Inches
A0	4.50±0.3	0.177 ± 0.012
B0	6.10±0.3	0.240 ± 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	5.5±0.2	0.217 ± 0.008
P0	4.00±0.2	0.157 ± 0.008
P1	8.00±0.2	0.315 ± 0.008
P2	2.00±0.2	0.079 ± 0.008
W	12.0±0.2	0.472 ± 0.008
W1	15.7±2.0	0.618 ± 0.079

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
P1800SE-G	0.13	3,000	48,000	13 inch reel pack

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co.,Ltd assumes no responsibility for the consequences of use without consideration for such information nor use beyond it. Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement. Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.
This document is the 1.1st version which is made in 30-Dec.-2020. This document supersedes and replaces all information previously supplied.

is a registered trademark of Jiangsu JieJie Microelectronics Co.,Ltd.