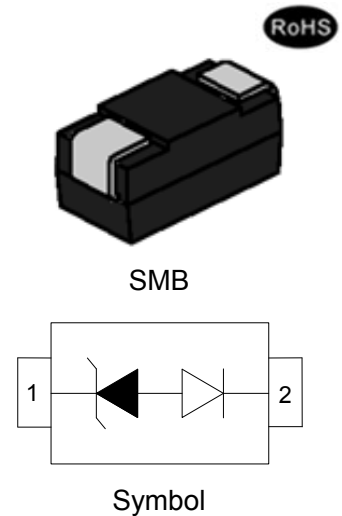


### DESCRIPTION:

JT06SC is component of low profile package and low capacitance instead of plated axial lead package SAC. It is easier for surface mounted using SMT machine. It has several advantages such as responding less than 1 picosecond, low clamping voltage and super low capacitance.

### FEATURES:

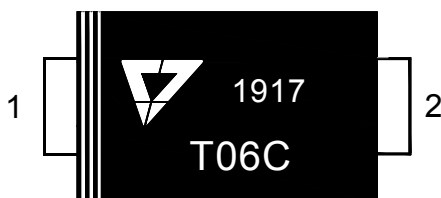
- ✧ Excellent clamping capability.
- ✧ High temperature reflow soldering: 260°C/40s at terminals.
- ✧ Plastic package has underwriters laboratory flammability 94V-0.
- ✧ Fast response time: typically less than 1.0ps from 0V to  $V_{BR}$  min.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C.
- ✧ Terminal: solder plated, solderable per J-STD-002.
- ✧ For surface mounted applications in order to optimize board space.
- ✧ IEC61000-4-2 (ESD)  $\pm 30kV$  (air),  $\pm 30kV$  (contact).



### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage and operating junction temperature range	T <sub>STG</sub> /T <sub>J</sub>	-55 to +150	°C
Peak pulse power dissipation at 10/1000µs waveform	P <sub>PP</sub>	600	W
Peak pulse voltage at 10/700µs@40Ω waveform	V <sub>PP</sub>	6000	V
Peak pulse current at 10/1000µs waveform	I <sub>PP</sub>	40	A

### MARKING



T06C : Device Marking Code  
1917: The 17th week, 2019

**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C)

Part Number	V <sub>R</sub>	I <sub>R</sub> @V <sub>R</sub>	V <sub>BR</sub> @I <sub>T</sub>	I <sub>T</sub>	V <sub>C</sub> @I <sub>PP</sub>	I <sub>PP</sub> <sup>①</sup>	Co <sup>②</sup>
Uni-polar	V	max(μA)	min(V)	mA	max(V)	A	typ(pF)
JT06SC	5	200	6	1	15	40	35

① Surge waveform: 10/1000μs

② Off-state capacitance is measured in V<sub>DC</sub>=2V, V<sub>RMS</sub>=1V, f=1MHz

V<sub>R</sub>: Stand-off voltage -- Maximum voltage that can be applied

V<sub>BR</sub>: Breakdown voltage

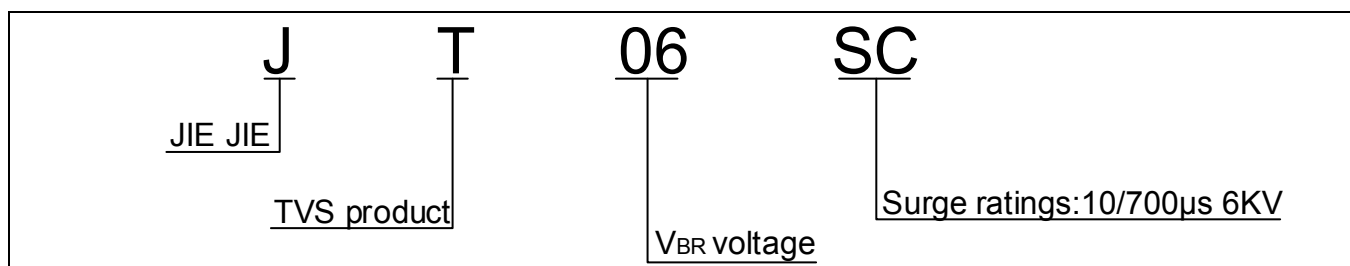
V<sub>C</sub>: Clamping voltage -- Peak voltage measured across the suppressor at a specified surge voltage

I<sub>R</sub>: Reverse leakage current

**COMPLIANT STANDARDS**

Standards	Peak pulse voltage(V)	Voltage waveform	Peak pulse current(A)	Current waveform	Minimum serial resistor to meet standard(Ω)
GR-1089-CORE	-	-	40	10/1000μs	-
ITU-T-K20/K21	6000	10/700μs	100	5/310μs	40
ITU-T-K20 (IEC6100-4-2)	30000	1/30ns	ESD Contact Discharge ESD Air Discharge		-
	30000	1/60ns			-
IEC6100-4-5	6000	10/700μs	100	5/310μs	40
	2000	1.2/50μs	150	8/20μs	12

**ORDERING INFORMATION**



RATINGS AND V-I CHARACTERISTICS CURVES ( $T_A=25^\circ\text{C}$ , unless otherwise noted)

FIG.1: V- I curve characteristics

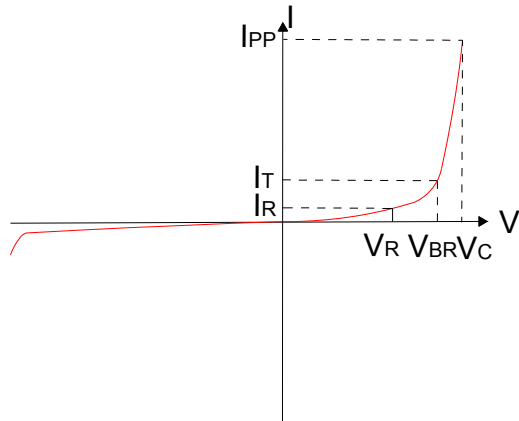


FIG.2: Pulse waveform

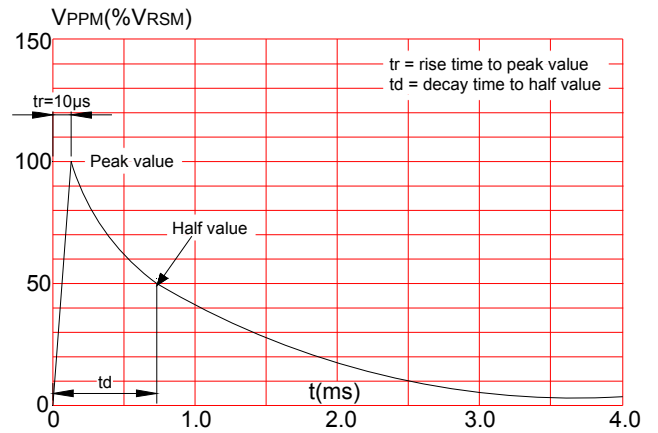


FIG.3: Pulse waveform

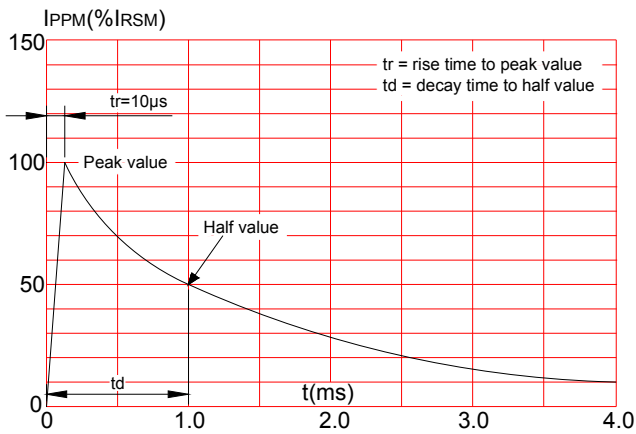
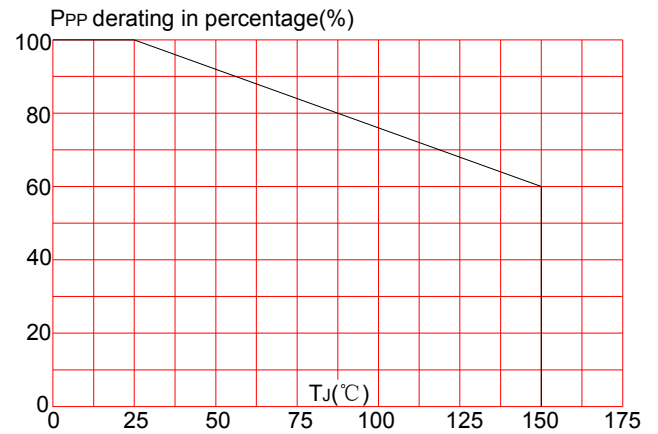
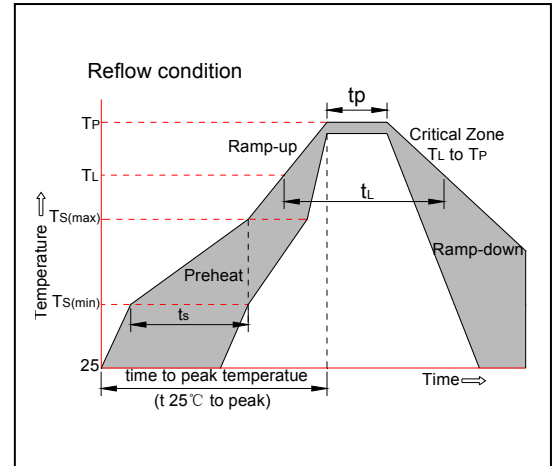


FIG.4: Pulse derating curve(10/1000µs)

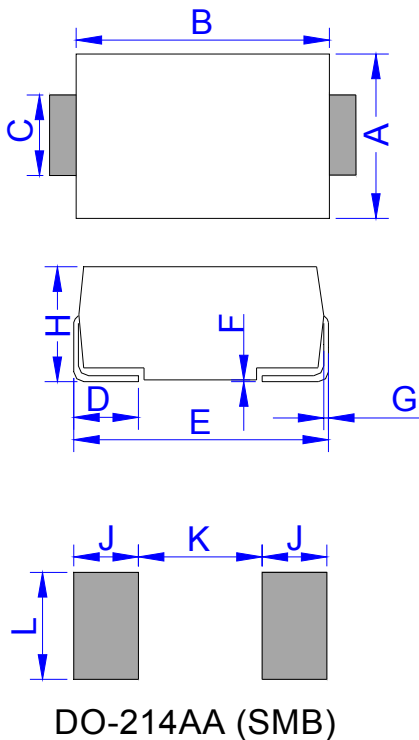


**SOLDERING PARAMETERS**

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ( $T_{S(min)}$ )	+150°C
	-Temperature Max( $T_{S(max)}$ )	+200°C
	-Time (Min to Max) (ts)	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 ( $t_p$ )		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C

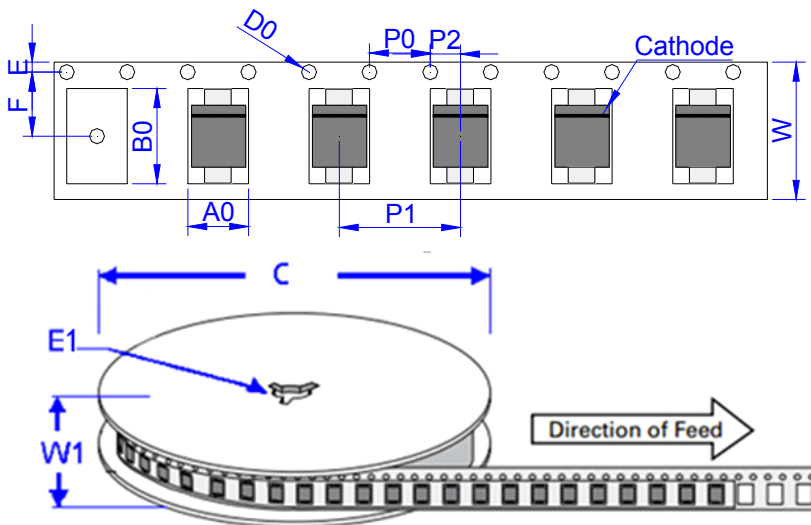


**PACKAGE MECHANICAL DATA**



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.30	4.80	0.169	0.189
C	1.90	2.20	0.075	0.087
D	0.95	1.52	0.037	0.060
E	5.20	5.60	0.205	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.10	2.40	0.083	0.094
J	2.20		0.087	
K		2.60		0.102
L	2.30		0.091	

**TAPE AND REEL SPECIFICATION-SMB**



Ref.	Dimensions	
	Millimeters	Inches
A0	3.76 ± 0.3	0.148 ± 0.012
B0	5.69 ± 0.3	0.224 ± 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	0.3145 ± 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
JT06SC	0.106	3,000	48,000	13 inch reel pack

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