

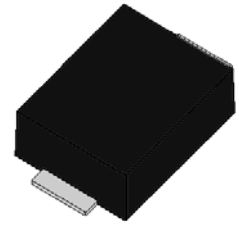
# UT58SCC Transient Voltage Suppressor

## DESCRIPTION:

WT58SCC is designed for DC 48V, POE supply equipment, It is used to replace the SMDJ series TVS, also can be solve the POE normal solution which use TSPD.

## FEATURES:

- ✧ Low profile package.
- ✧ Excellent clamping capability.
- ✧ Glass passivated junction.
- ✧ High temperature reflow soldering: 260°C/40s at terminals.
- ✧ Plastic package has underwriters laboratory flammability 94V-0.
- ✧ For surface mounted applications in order to optimize board space



SMBF



Bi-directional  
Symbol

## SURGE LEVEL

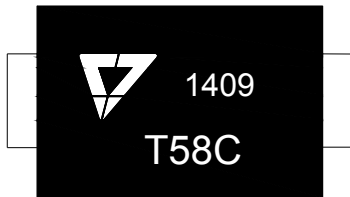
- ✧ 10/700µs 40ohm 6KV
- ✧ 1.2/50µs-8/20µs 2ohm 1.4KV

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

Parameter Sy	mbol	Value	Unit
Storage operating junction temperature range	T <sub>STG</sub> /T <sub>J</sub>	-55 to +150	°C
Steady state power dissipation at T <sub>L</sub> =75°C	P <sub>M(AV)</sub>	5.0	W
Peak pulse power (t <sub>p</sub> =10/1000µs)	P <sub>PP</sub>	3000	W
Peak surge voltage on 10/700µs waveform	V <sub>PP</sub>	6000	V
Peak pulse current on 8/20µs waveform	I <sub>PP</sub>	700	A
Peak pulse current on 10/1000µs waveform	I <sub>PP</sub>	36.0	A

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## MARKING



T58C: Device Marking Code  
1409: In ninth week, 2014

## 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> @10/700μs 6KV /40 Ω	V <sub>C</sub> @8/20μs 700A	V <sub>C</sub> @ 10/1000μs 36A
			min(V)	max(V)		max(V)	max(V)	max(V)
UT58SCC	58	1	60	75	1	90	90	90

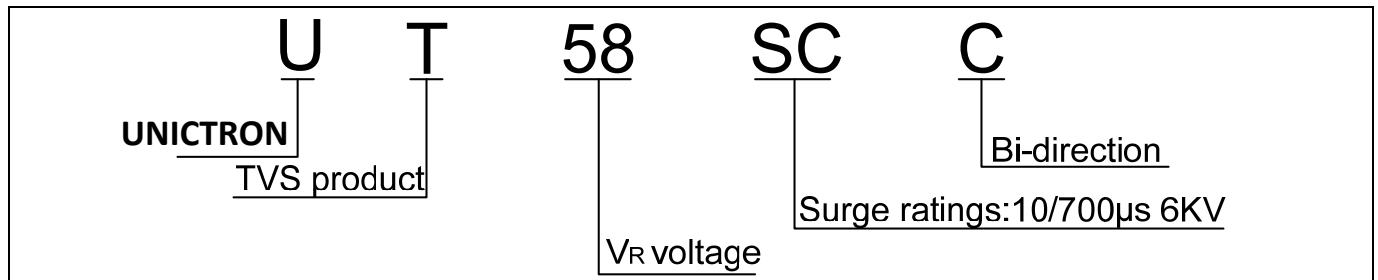
V<sub>R</sub>: Stand-off voltage -- Maximum voltage that can be applied

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

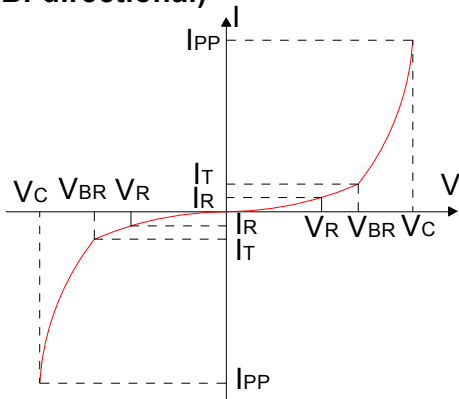
## ORDERING INFORMATION



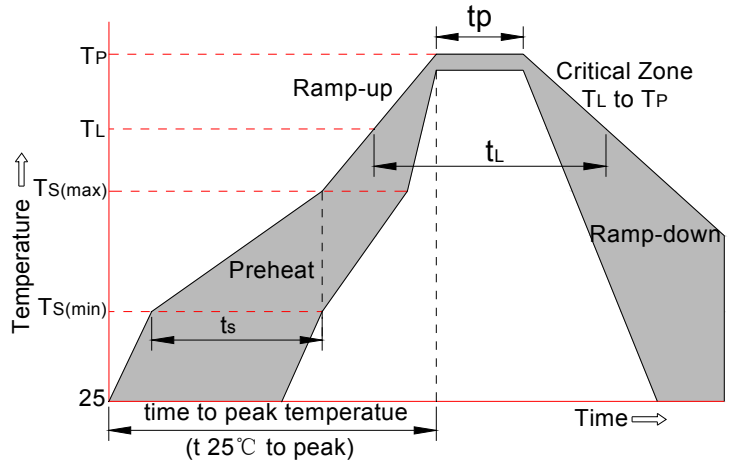
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## RATINGS AND V-I CHARACTERISTICS CURVES ( $T_A=25^\circ\text{C}$ , unless otherwise noted)

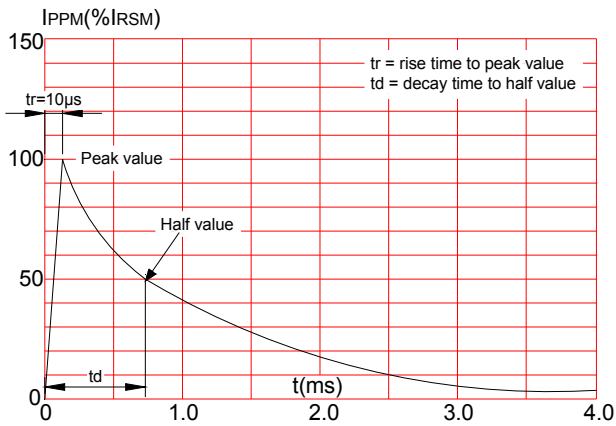
**FIG.1: V- I curve characteristics (Bi-directional)**



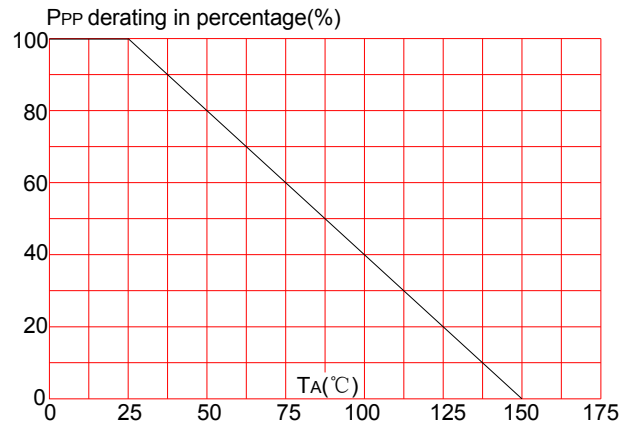
**FIG.2: Reflow condition**



**FIG.3: Pulse waveform**



**FIG.4: Pulse derating curve**

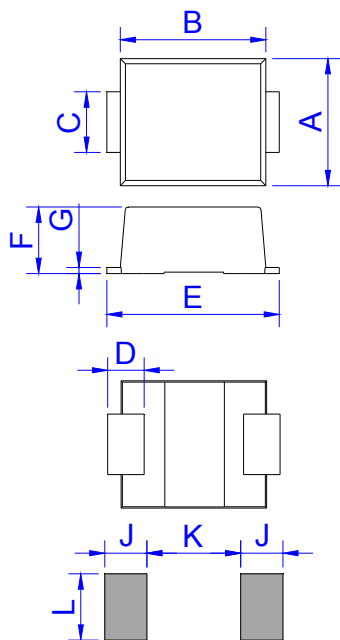


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## SOLDERING PARAMETERS

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) (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

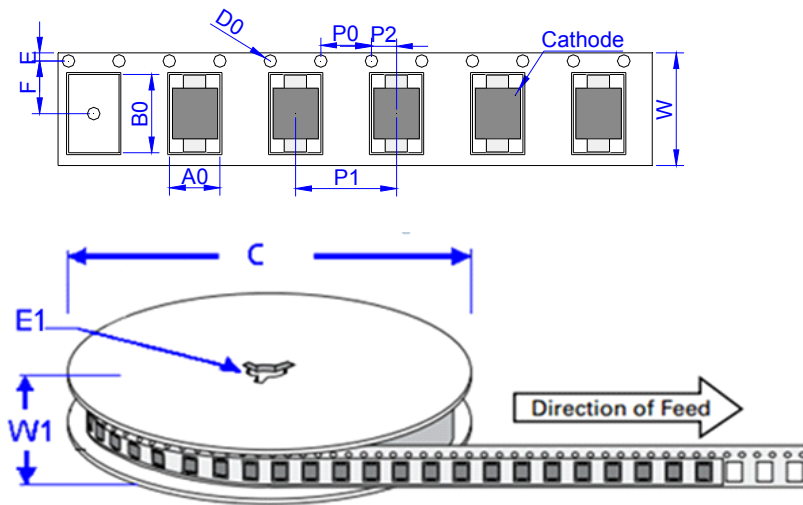


SMBF

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	0.90		0.035	
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	

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## 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

OUTLINE	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	3,000	48,000	330