

CP0080TBC Overvoltage Protector Series

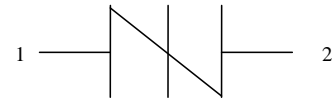
Description and Feature

- ✧ 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

Pin Information and Graphic symbol



SMA




symbol

Application information

- ✧ Video/Audio Ports
- ✧ Low frequency signal transmission line (RS232, RS485, etc.)

Agency Approvals

Icon	Description
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003
	Mean lead free

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

Parameter	Symbol	Value	Unit
Storage temperature range	T _{stg}	-60 to +150	°C
Operating junction temperature range	T _j	-40 to +150	°C
Repetitive peak pulse voltage 10×700 waveform	V _{PP}	4000	V

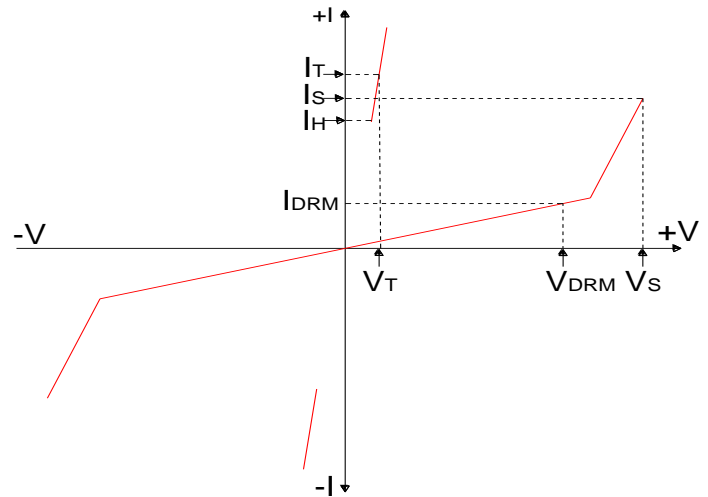
SURGE RATINGS

Series	I _{PP} (A) min			
	2×10us	8×20us	10×360us	10×1000us
B	250	250	125	80

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ELECTRICAL CHARACTERISTICS (TA=25°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

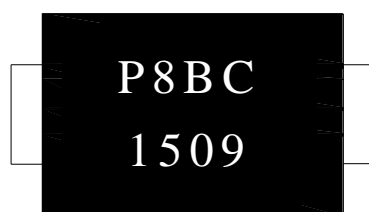


Part Number	$I_{DRM}@V_{DRM}$		V_S ①@ I_S		$V_T@I_T$		I_H	C_O ②	Marking
	μA	V	V	mA	V	A	mA	pF	
	max		max	max	max	max	min	max	
CP0080TBC	1	6	15	800	3	2.2	50	35	P8BC

① V_S is measured at 100KV/s

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

Marking



P8BC: Device Marking Code
1509: In ninth week, 2015

ORDERING INFORMATION

CP	008	0	T	B	C
Low cap series SIDACTor	Median voltage	0: Bi-direction 1: Uni-direction	Package type	Surge ratings:4KV(10/700 μ s)	Capacitance level

FIG.1: tr x td pulse waveform

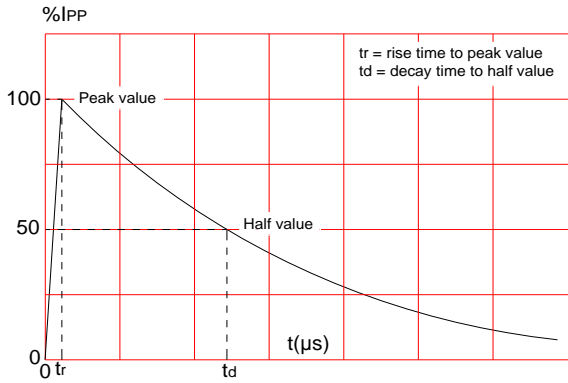


FIG.3: Normalized Vs change vs. junction temperature

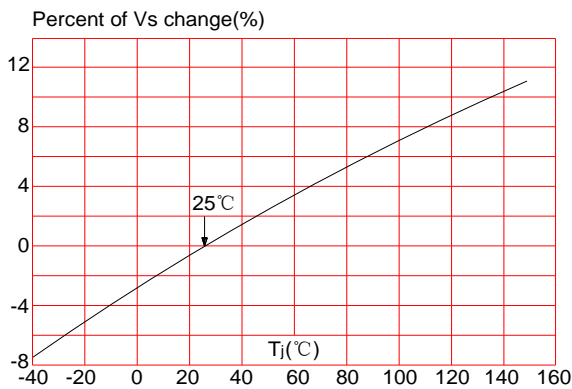


FIG.2: Reflow condition

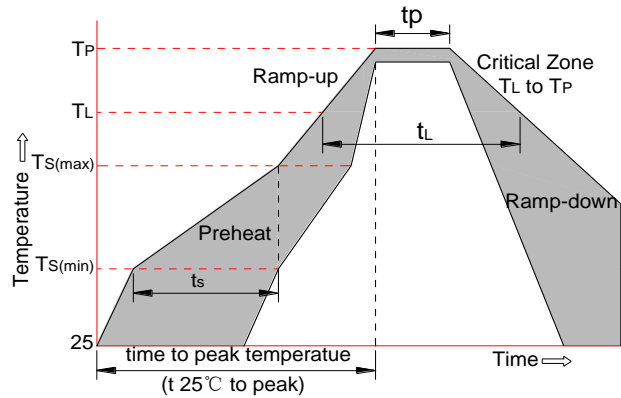
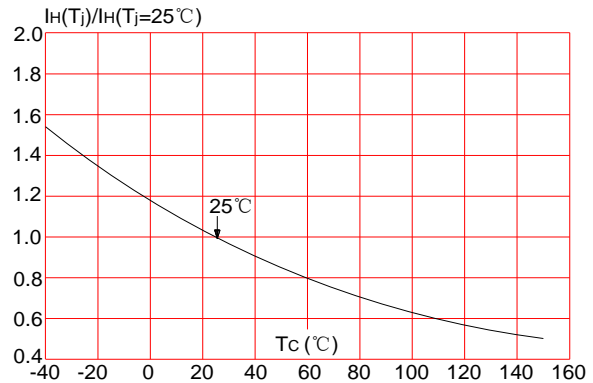


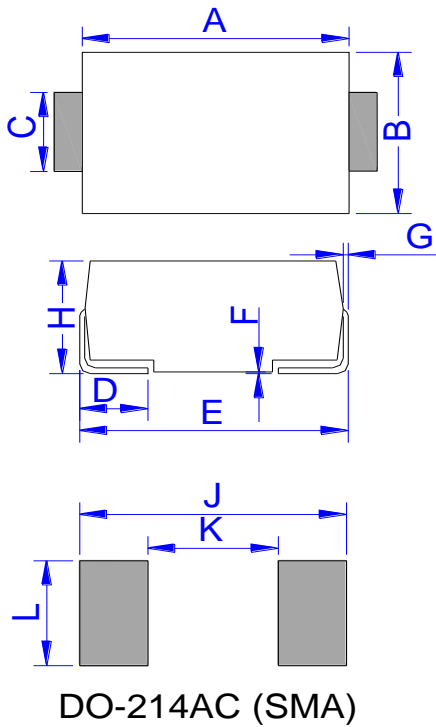
FIG.4: Normalized DC holding current vs. case temperature



SOLDERING PARAMETERS

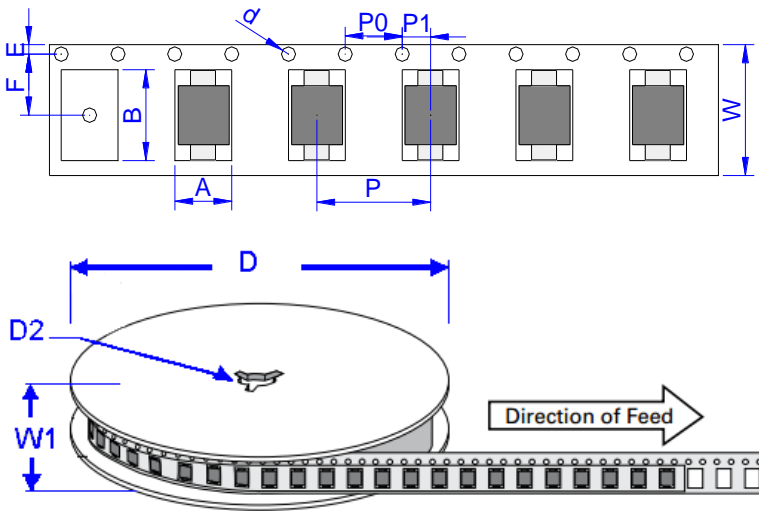
Reflow Condition		Pb-Free assembly (see FIG.5)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+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

PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.65	0.167	0.183
B	2.50	2.90	0.098	0.114
C	1.35	1.65	0.053	0.065
D	0.76	1.52	0.030	0.060
E	4.93	5.28	0.194	0.208
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	1.98	2.41	0.078	0.095
J	6.80		0.268	
K		2.60		0.102
L	2.40		0.094	

TAPE AND REEL SPECIFICATION-SMA



Ref.	Dimensions	
	Millimeters	Inches
A	2.79 ± 0.3	0.110 ± 0.012
B	5.33 ± 0.3	0.210 ± 0.012
d	1.5 ± 0.1	0.059 ± 0.004
D	330.0	13.0
D2	13 ± 1	0.512 ± 0.039
E	1.5 ± 0.2	0.059 ± 0.008
F	5.65 ± 0.2	0.222 ± 0.008
P	4.0 ± 0.2	0.157 ± 0.008
P0	4.0 ± 0.2	0.157 ± 0.008
P1	2.0 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	16.8 ± 2.0	0.661 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL(PCS)	PACKAGE	TAPE & REEL
TAPING	0.069	5,000	SMA(DO214AC)	13inch