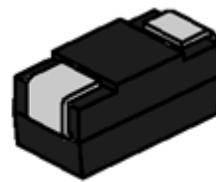


**DESCRIPTION:**

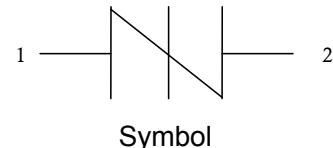
P0080AES\P0080BES\P0080CES are a type of semiconductor component. They are designed in applications: modems, telephones, line cards, answering machines, FAX machines, SLICs, T1/E1, xDSL, PBXs and more.



SMA

FEATURES:

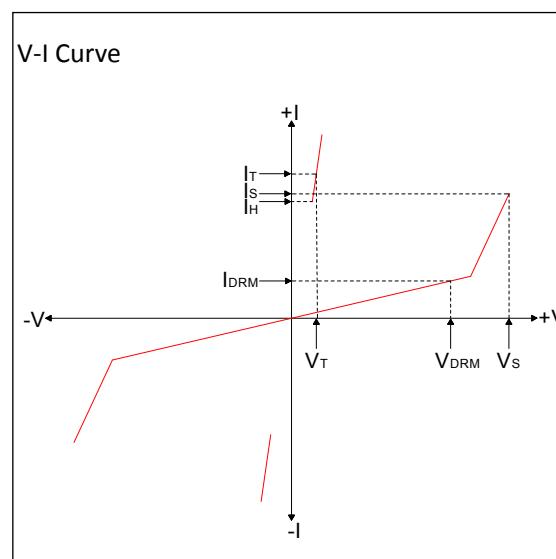
- ✧ Low profile package.
- ✧ Low on-state voltage.
- ✧ Excellent capability of absorbing transient surge.
- ✧ Quick response to surge voltage (ns Level).
- ✧ Eliminates overvoltage caused by fast rising transients.
- ✧ Moisture sensitivity level: Level 1.
- ✧ Non degenerative.

**ABSOLUTE MAXIMUM RATINGS**($T_A=25^\circ\text{C}$, RH=45%-75%, unless otherwise noted)

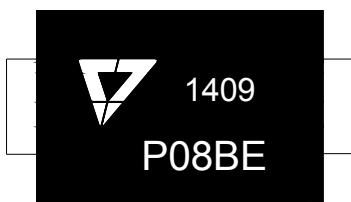
Parameter	Symbol	Value	Unit
Storage temperature range	T_{STG}	-60 to +150	°C
Operating junction temperature range	T_J	-40 to +125	°C
Repetitive peak pulse current	I_{PP}	See surge ratings	A
ESD rating per IEC61000-4-2:Contact&Air		15	KV

ELECTRICAL CHARACTERISTICS($T_A=25^\circ\text{C}$)

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



MARKING



P08BE: Device Marking Code
1409: In ninth week, 2014

ELECTRICAL CHARACTERISTICS($T_A=25^\circ\text{C}$, continued)

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	
P0080AES	1	6	15	800	4	2.2	30	80	P08AE
P0080BES	1	6	15	800	4	2.2	30	110	P08BE
P0080CES	1	6	15	800	4	2.2	30	130	P08CE

① V_s is measured at 100KV/s

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

SURGE RATINGS

Series	$I_{PP}(\text{A}) \text{ min}$			
	$2 \times 10\mu\text{s}$	$8 \times 20\mu\text{s}$	$10 \times 360\mu\text{s}$	$10 \times 1000\mu\text{s}$
A	150	150	75	50
B	250	250	125	80
C	400	400	175	100

ORDERING INFORMATION

P	008	0	B	E	S	
Series code P: SIDACtor						
Median voltage						
	0: Bi-direction 1: Uni-direction				ESD ratings	Package:SMA
						Surge ratings:A=2KV,B=4KV C=6KV@10/700μs

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)		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

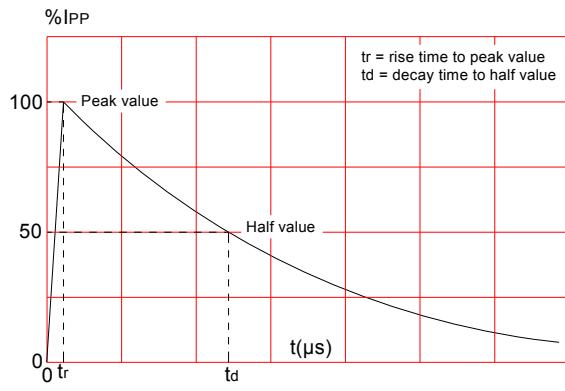
FIG.1: $tr \times td$ pulse waveform

FIG.2: Reflow condition

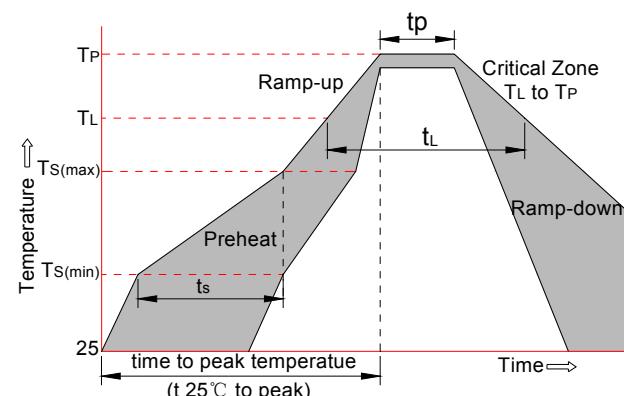


FIG.3: Normalized Vs change vs. junction temperature

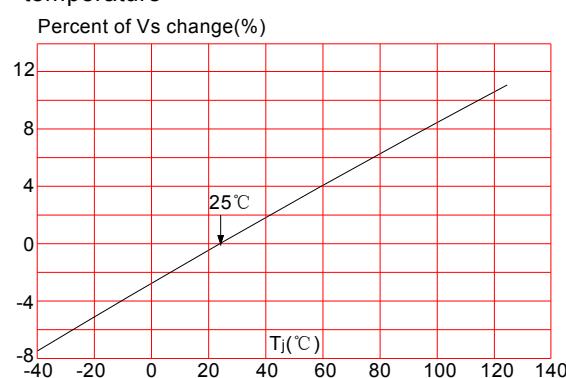
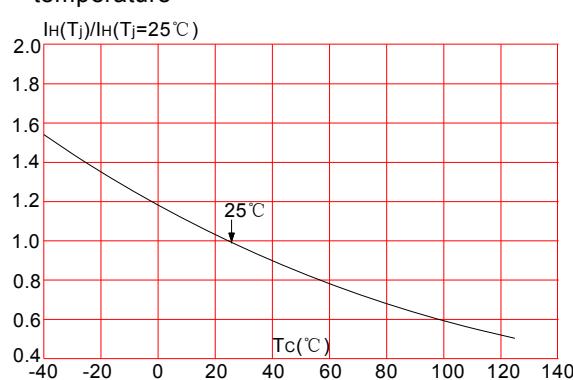
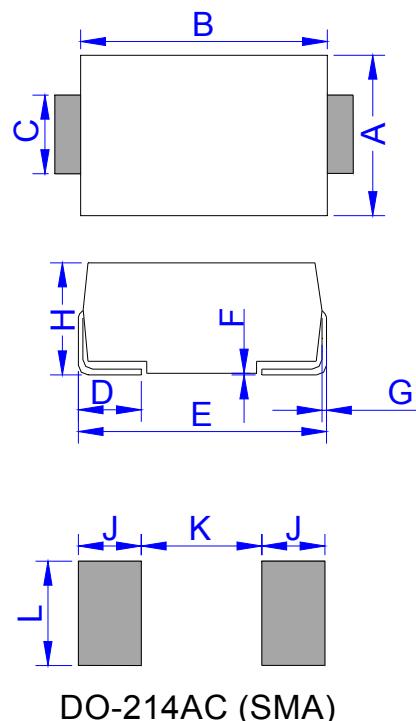


FIG.4: Normalized DC holding current vs. case temperature

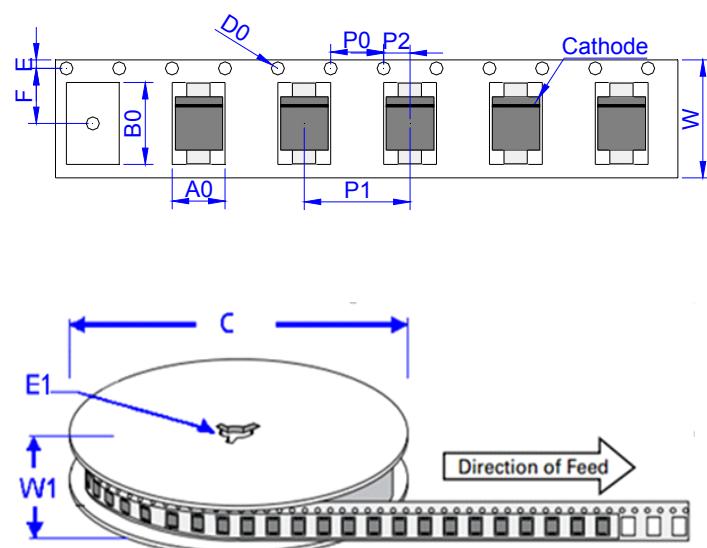


PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	4.15	4.65	0.163	0.183
C	1.25	1.65	0.049	0.065
D	0.95	1.52	0.037	0.060
E	4.90	5.30	0.193	0.209
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.00	2.44	0.079	0.096
J	2.00		0.079	
K		2.30		0.091
L	1.80		0.071	

TAPE AND REEL SPECIFICATION-SMA



Ref.	Dimensions	
	Millimeters	Inches
A0	2.79 ± 0.3	0.110 ± 0.012
B0	5.33 ± 0.3	0.210 ± 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	4.00 ± 0.2	0.157 ± 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	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	0.066	5,000	80,000	330

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