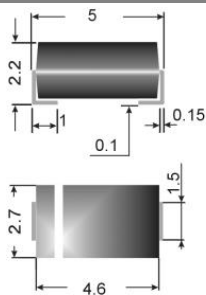


# P4 SMA 220 ... P4 SMA 440CA



## Surface mount diode

### Bidirectional Transient Voltage Suppressor diodes

P4 SMA 220 ... P4 SMA 440CA

**Pulse Power Dissipation: 400 W**

**Stand-off voltage: 175 ... 376 V**

### Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0
- For bidirectional types (suffix "C" or "CA") electrical characteristics apply in both directions
- The standard tolerance of the breakdown voltage for each type is  $\pm 10\%$ . Suffix "A" denotes a tolerance of  $\pm 5\%$  for the breakdown voltage.

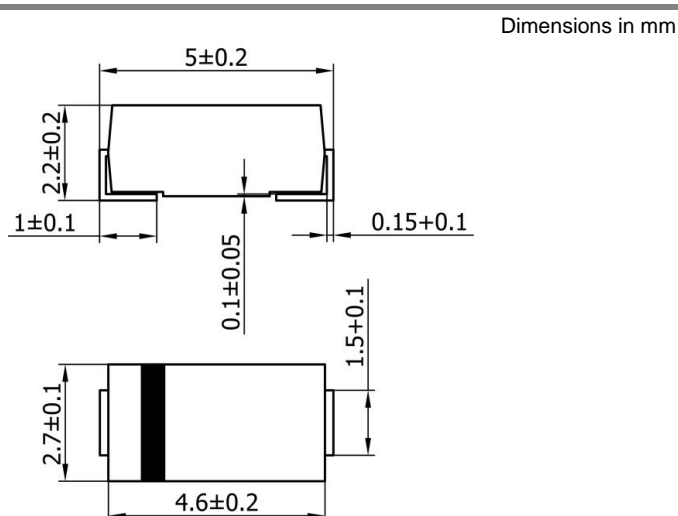
### Mechanical Data

- Plastic case: SMA / DO-214AC
- Weight approx.: 0,07 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 7500 pieces per reel

- 1) Non-repetitive current pulse see curve  $I_{PPM} = f(t_r)$
- 2) Mounted on P.C. board with 25 mm<sup>2</sup> copper pads at each terminal
- 3) Unidirectional diodes only
- 4) Bidirectional diodes only

Absolute Maximum Ratings		$T_A = 25^\circ\text{C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$P_{PPM}$	Peak pulse power dissipation (10/1000 $\mu\text{s}$ pulse waveform, <sup>1)</sup> $T_a = 25^\circ\text{C}$	400	W
$P_{M(AV)}$	Steady state power dissipation <sup>2)</sup> , $T_a = 25^\circ\text{C}$	1	W
$I_{FSM}$	Peak forward surge current, 60 Hz half sine-wave, <sup>3)</sup> $T_a = 25^\circ\text{C}$	40	A
$R_{thA}$	Max. thermal resistance junction to ambient <sup>2)</sup>	70	K/W
$R_{thT}$	Max. thermal resistance junction to terminal	30	K/W
$T_j$	Operating junction temperature	- 50 ... + 150	$^\circ\text{C}$
$T_s$	Storage temperature	- 50 ... + 150	$^\circ\text{C}$
$V_f$	Max. instant. forw. voltage $I_f = A$ <sup>3)</sup>	-	V
		-	V

Type	Stand-off voltage@ $I_D$		Breakdown voltage@ $I_T$		Test current $I_T$ mA	Max. clamping voltage@ $I_{PPM}$	
	$V_{WM}$ V	$I_D$ $\mu\text{A}$	min. V	max. V		$V_C$ V	$I_{PPM}$ A
P4SMA 220 <sup>4)</sup>	175	5	198	242	1	344	1,2
P4SMA 220A <sup>4)</sup>	185	5	209	231	1	328	1,2
P4SMA 250C <sup>4)</sup>	202	5	225	275	1	360	1,1
P4SMA 250CA <sup>4)</sup>	214	5	237	263	1	344	1,2
P4SMA 300C <sup>4)</sup>	243	5	270	330	1	430	0,93
P4SMA 300CA <sup>4)</sup>	256	5	285	315	1	414	0,97
P4SMA 350C <sup>4)</sup>	284	5	315	385	1	504	0,79
P4SMA 350CA <sup>4)</sup>	300	5	332	368	1	482	0,83
P4SMA 400C <sup>4)</sup>	324	5	360	440	1	574	0,7
P4SMA 400CA <sup>4)</sup>	342	5	380	420	1	548	0,73
P4SMA 440C <sup>4)</sup>	356	5	396	484	1	631	0,63
P4SMA 440CA <sup>4)</sup>	376	5	418	462	1	602	0,66



case: SMA / DO-214AC

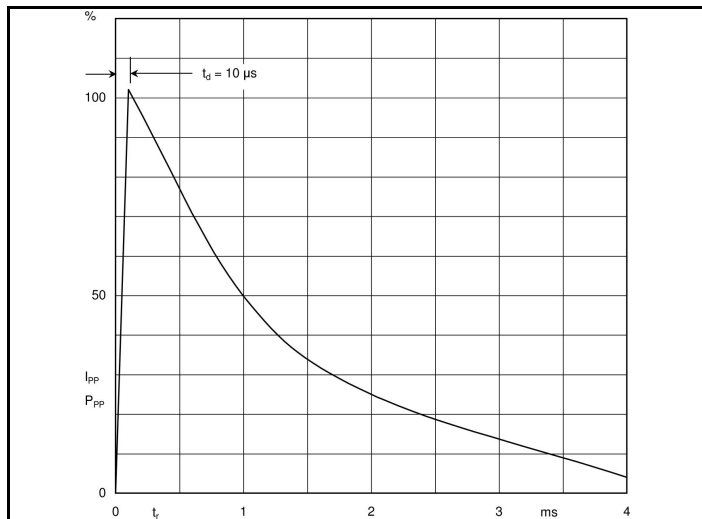


Fig. 1, 10/1000 µs - pulse waveform

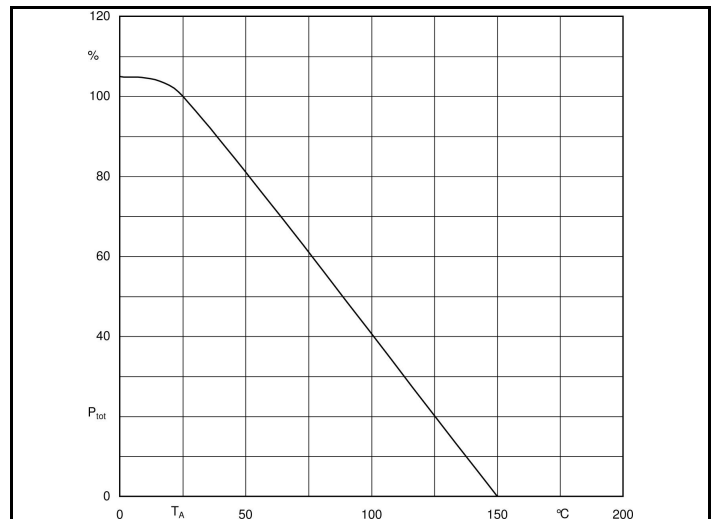


Fig. 2, Rated power dissipation vs. ambient temp. <sup>2)</sup>

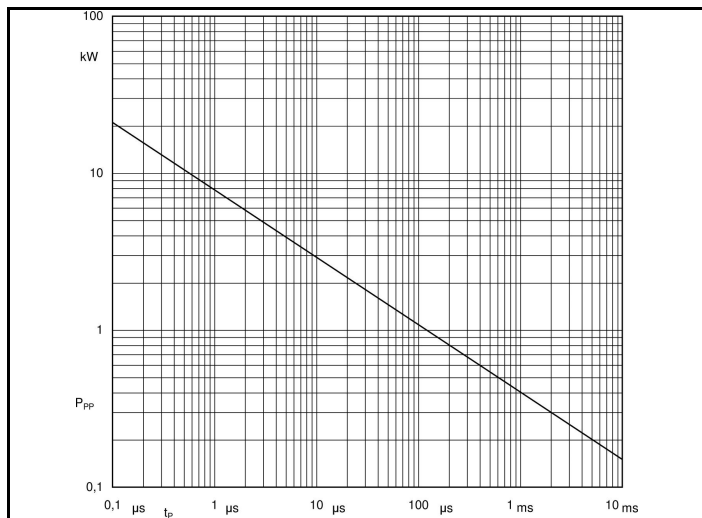


Fig. 3, Peak pulse power versus pulse duration