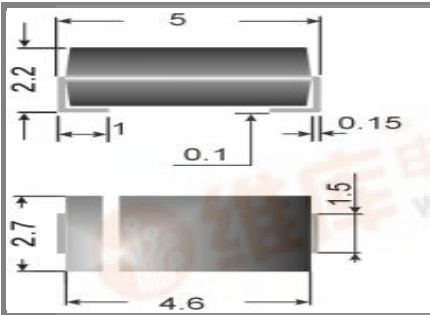


# P4 SMAJ 150...P4 SMAJ 180CA



Surface mount diode

Unidirectional and bidirectional Transient Voltage Suppressor diodes

P4 SMAJ 150...P4 SMAJ 180CA

**Pulse Power Dissipation: 400 W**

**Maximum Stand-off voltage: 150 ... 180 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 ± 10%. Suffix "A" denotes a tolerance of ± 5% for the breakdown voltage.

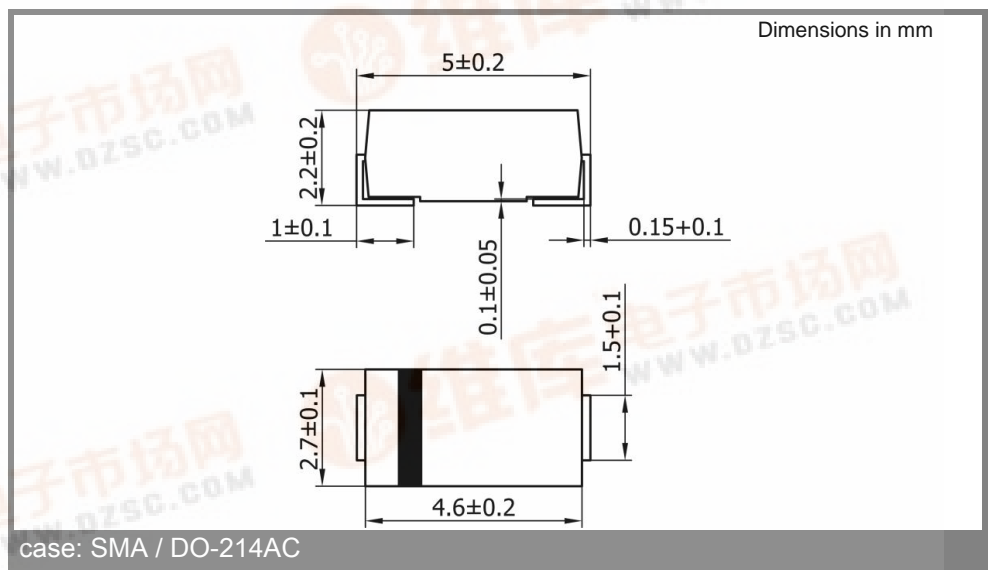
### Mechanical Data

- 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

Absolute Maximum Ratings		$T_c = 25^\circ\text{C}$ , unless otherwise specified	
Symbol	Conditions	Values	Units
$P_{PPM}$	Peak pulse power dissipation (10/1000 $\mu\text{s}$ 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 $I_f = 25\text{ A}$ <sup>3)</sup>	<3,5	V
		-	V

Type	Max 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
P4 SMAJ 150	150	5	167	204	1	268	1,5
P4 SMAJ 150A	150	5	167	185	1	243	1,6
P4 SMAJ 160	160	5	178	217	1	287	1,4
P4 SMAJ 160A	160	5	178	198	1	259	1,5
P4 SMAJ 170	170	5	189	231	1	304	1,3
P4 SMAJ 170A	170	5	189	210	1	275	1,4
P4 SMAJ 180	180	5	209	255	1	0,9	344
P4 SMAJ 180A	180	5	209	231	1	0,91	328



# P4 SMAJ 150...P4 SMAJ 180CA

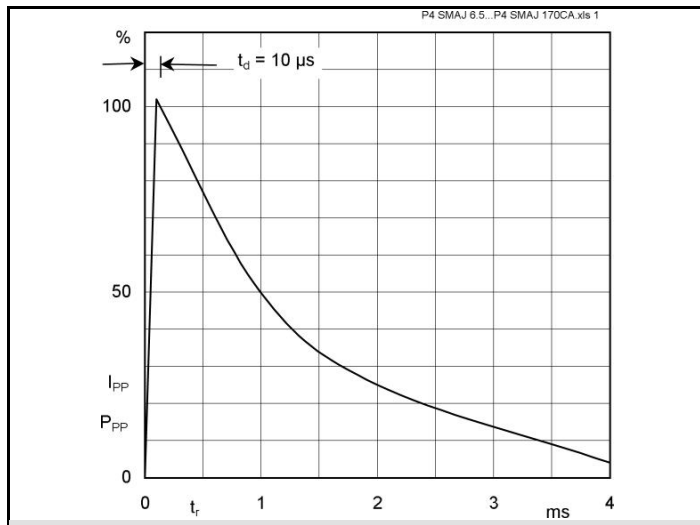


Fig. 1 10/1000  $\mu\text{s}$  - pulse waveform

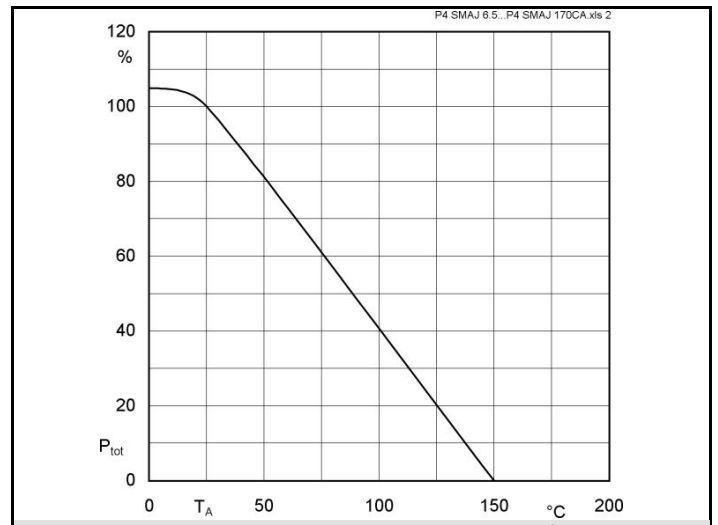


Fig. 2 Rated power dissipation vs. ambient temperature <sup>2)</sup>

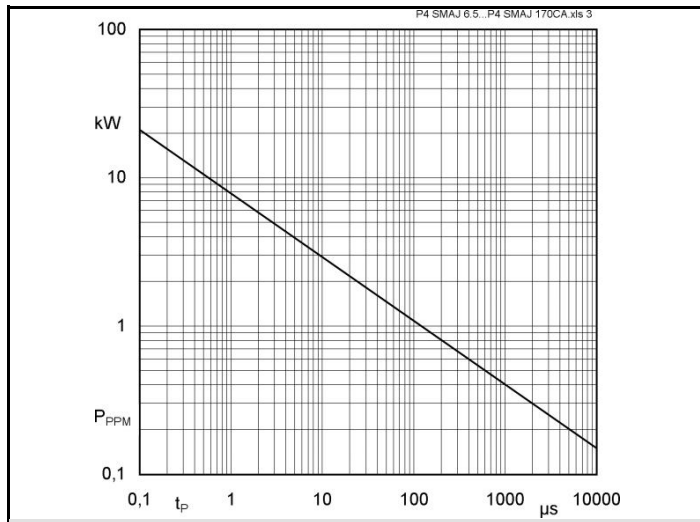


Fig. 3 Peak pulse power versus pulse duration