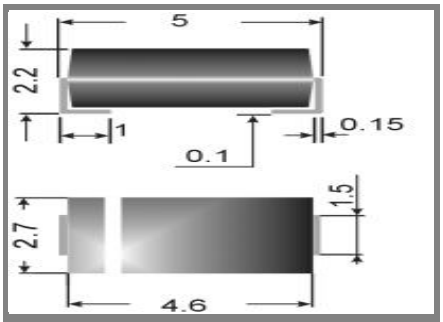
P4 SMAJ 150...P4 SMAJ 180CA



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 mm² copper pads at each terminal
3) Undirectional diodes only

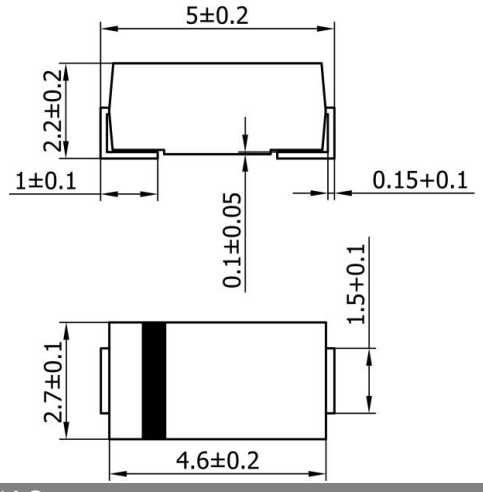
Absolute Maximum Ratings T_c = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
P_{PPM}	Peak pulse power dissipation (10/1000 µs waveform) 1) T_a = 25 °C	400	W
$P_{M(AV)}$	Steady state power dissipation2), T_a = 25 °C	1	W
I_{FSM}	Peak forward surge current, 60 Hz half sine-wave 3) T_a = 25 °C	40	A
R_{thA}	Max. thermal resistance junction to ambient 2)	70	K/W
R_{thT}	Max. thermal resistance junction to terminal	30	K/W
T_j	Operating junction temperature	- 50 ... + 150	°C
T_s	Storage temperature	- 50 ... + 150	°C
V_f	Max. instant. forw. voltage I_f = 25 A 3)	<3,5	V
		-	V

Characteristics

Type	Max stand-off voltage@I_D		Breakdown voltage@I_T		Test current I_T	Max. clamping voltage@I_{PPM}	
	V_{WM} V	I_D µA	min. V	max. V	mA	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

Dimensions in mm



case: SMA / DO-214AC

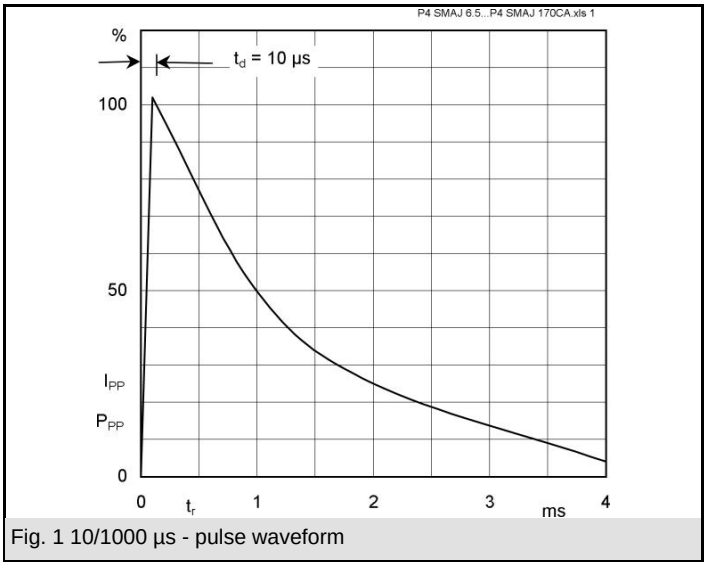


Fig. 1 10/1000 µs - pulse waveform

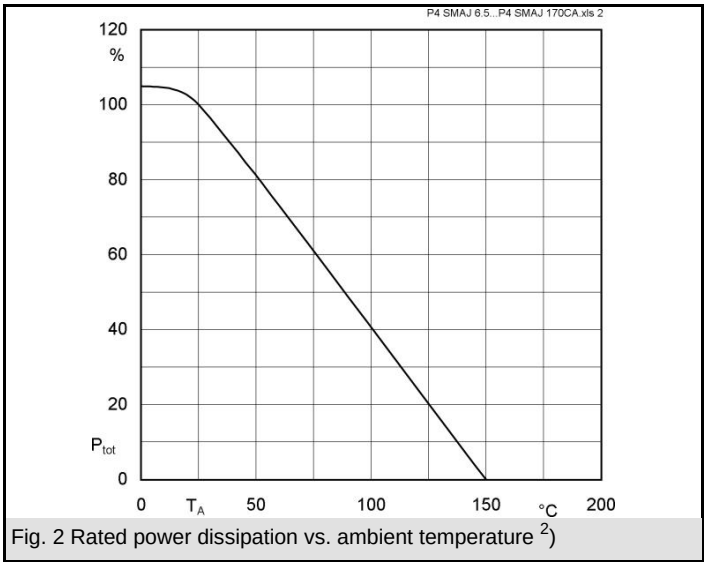


Fig. 2 Rated power dissipation vs. ambient temperature [2])

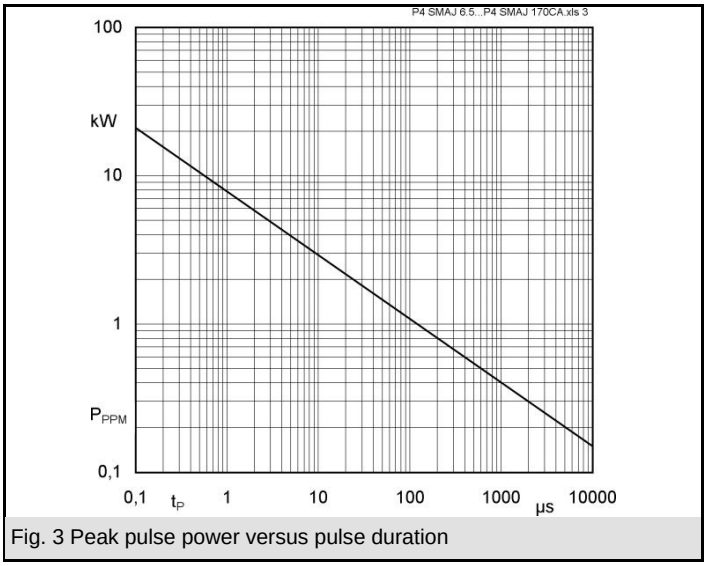


Fig. 3 Peak pulse power versus pulse duration

