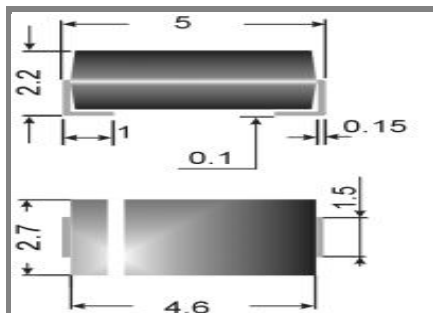


P4 SMAJ 150...P4 SMAJ 180CA



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 $\pm 10\%$. 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

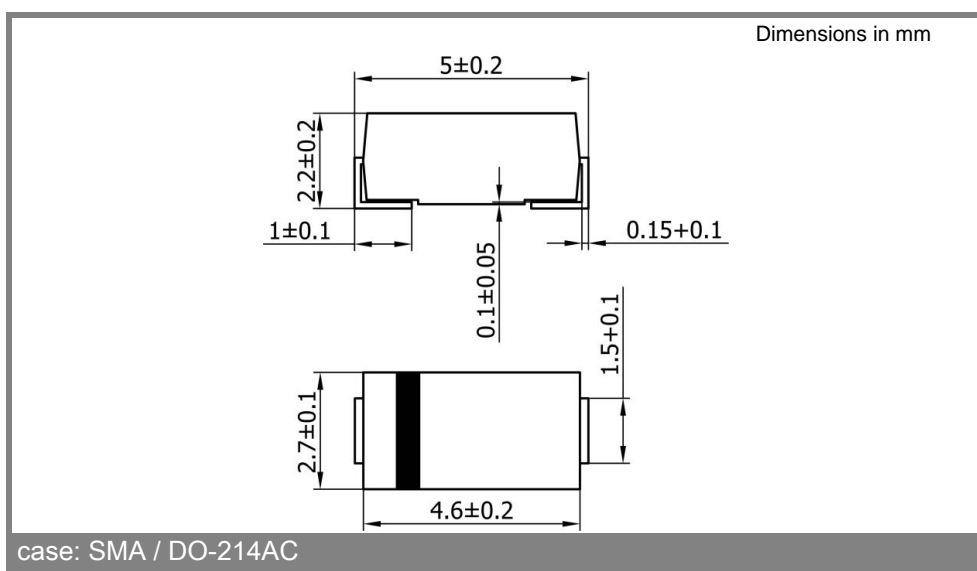
1) Non-repetitive current pulse see curve $I_{PPM} = f(t_r)$

2) Mounted on P.C. board with 25 mm² copper pads at each terminal

3) Unidirectional diodes only

Absolute Maximum Ratings		$T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
P_{PPM}	Peak pulse power dissipation (10/1000 μs waveform) ¹⁾ $T_a = 25\text{ }^\circ\text{C}$	400	W
$P_{M(AV)}$	Steady state power dissipation ²⁾ , $T_a = 25\text{ }^\circ\text{C}$	1	W
I_{FSM}	Peak forward surge current, 60 Hz half sine-wave, ³⁾ $T_a = 25\text{ }^\circ\text{C}$	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	$^\circ\text{C}$
T_s	Storage temperature	- 50 ... + 150	$^\circ\text{C}$
V_f	Max. instant. forw. voltage $I_f = 25\text{ A}$ ³⁾	<3,5	V
		-	V

Type	Characteristics						
	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 μA	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



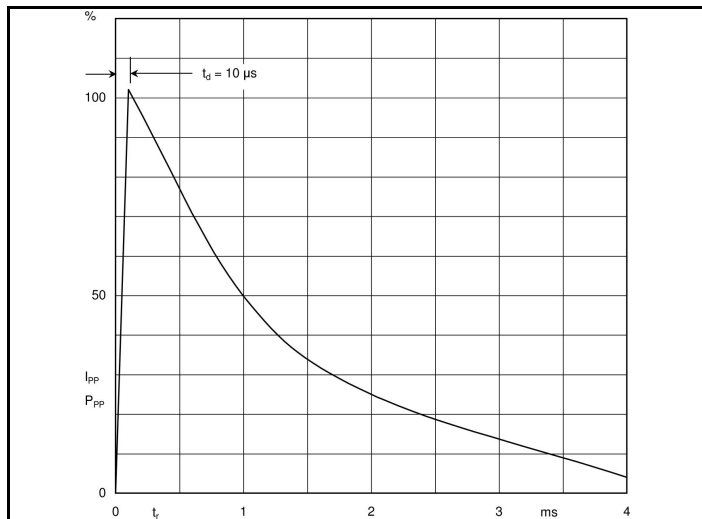


Fig. 1 10/1000 μ s - pulse waveform

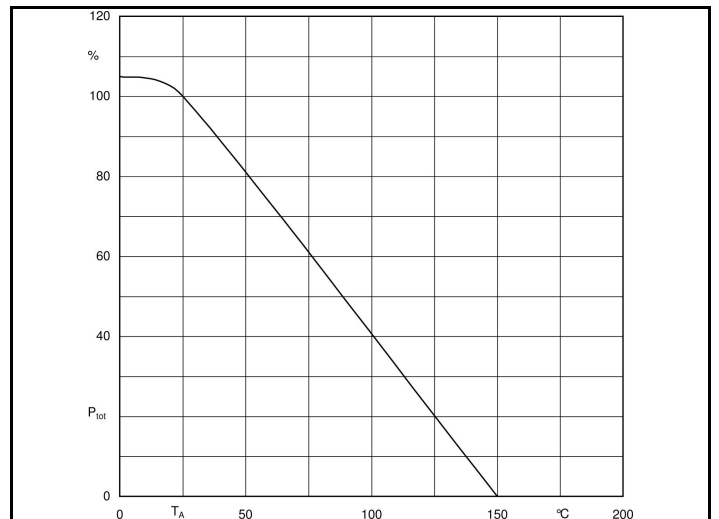


Fig. 2 Rated power dissipation vs. amb.temp. ²⁾

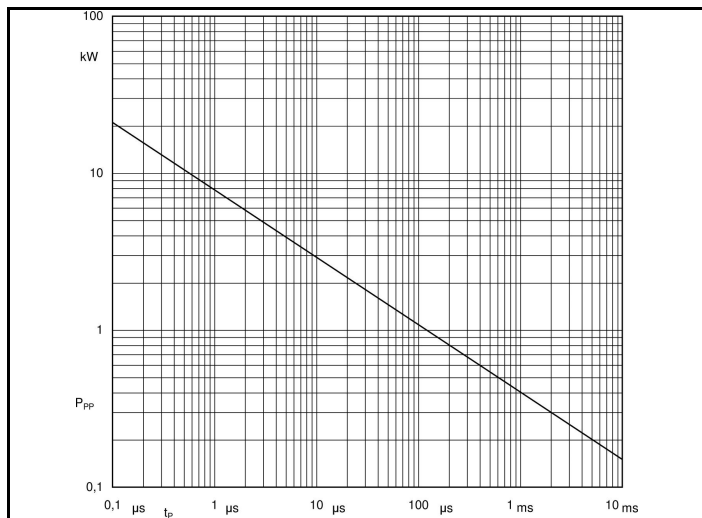


Fig. 3 Peak pulse power versus pulse duration