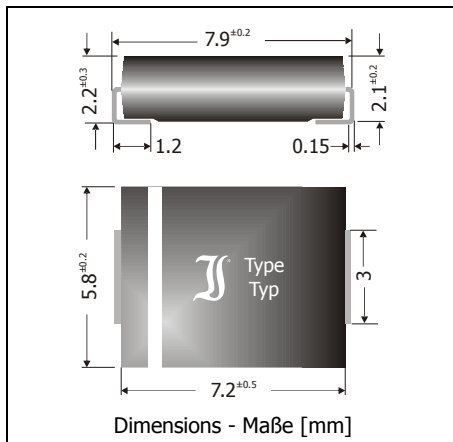



### 3.0SMCJ5.0A ... 3.0SMCJ170CA

#### Surface mount unidirectional and bidirectional Transient Voltage Suppressor Diodes Unidirektionale und bidirektionale Spannungs-Begrenzer-Dioden für die Oberflächenmontage

Version 2014-09-15



Peak pulse power dissipation Impuls-Verlustleistung	3000 W
Nominal Stand-off voltage Nominale Sperrspannung	5.0...170 V
Plastic case Kunststoffgehäuse	~ SMC ~ DO-214AB
Weight approx. – Gewicht ca.	0.21 g
Plastic material has UL classification 94V-0 Gehäusematerial UL94V-0 klassifiziert	
Standard packaging taped and reeled Standard Lieferform gegurtet auf Rollen	

For bidirectional types (add suffix "CA"), electrical characteristics apply in both directions.  
Für bidirektionale Dioden (ergänze Suffix "CA") gelten die elektrischen Werte in beiden Richtungen.

#### Maximum ratings and Characteristics

#### Grenz- und Kennwerte

Peak pulse power dissipation (10/1000 $\mu$ s waveform) Impuls-Verlustleistung (Strom-Impuls 10/1000 $\mu$ s)	$T_A = 25^\circ\text{C}$	$P_{PPM}$	3000 W <sup>1)</sup>
Steady state power dissipation Verlustleistung im Dauerbetrieb	$T_T = 75^\circ\text{C}$	$P_{M(AV)}$	6 W
Peak forward surge current, 60 Hz half sine-wave Stoßstrom für eine 60 Hz Sinus-Halbwelle	$T_A = 25^\circ\text{C}$	$I_{FSM}$	300 A <sup>2)</sup>
Max. instantaneous forward voltage Augenblickswert der Durchlass-Spannung	$I_F = 100\text{ A}$	$V_F$	< 3.0 V <sup>2)</sup>
Operating junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur		$T_j$ $T_s$	-50...+150°C -50...+150°C
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft		$R_{thA}$	< 33 K/W <sup>3)</sup>
Thermal resistance junction to terminal Wärmewiderstand Sperrschicht – Anschluss		$R_{thT}$	< 10 K/W

1 Non-repetitive pulse see curve  $I_{pp} = f(t)$  /  $P_{pp} = f(t)$

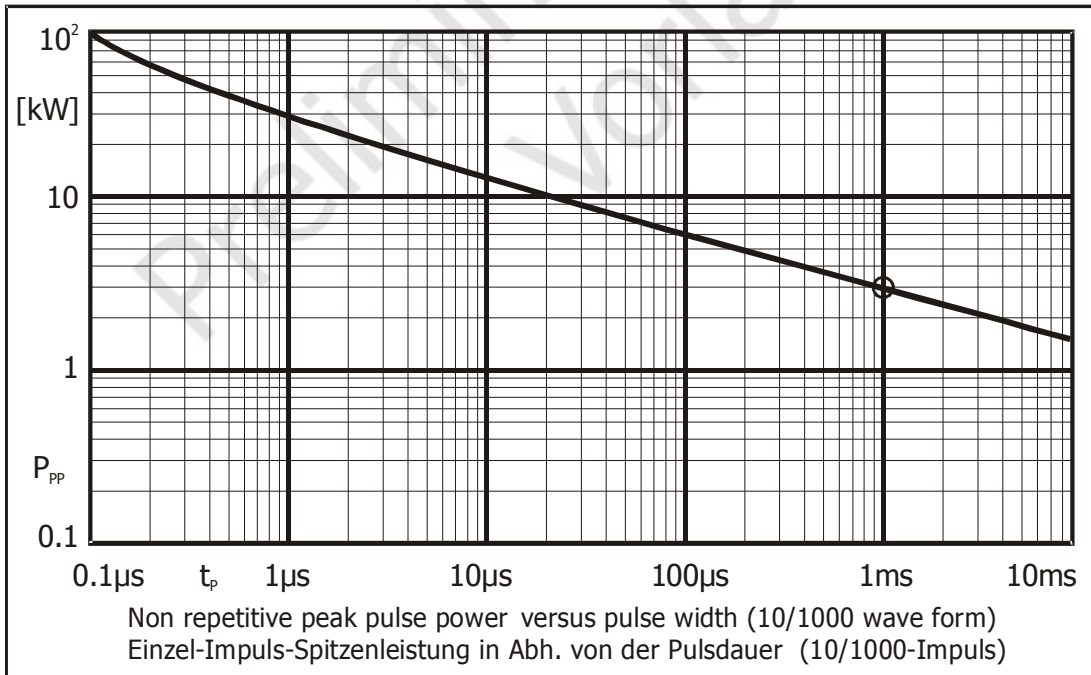
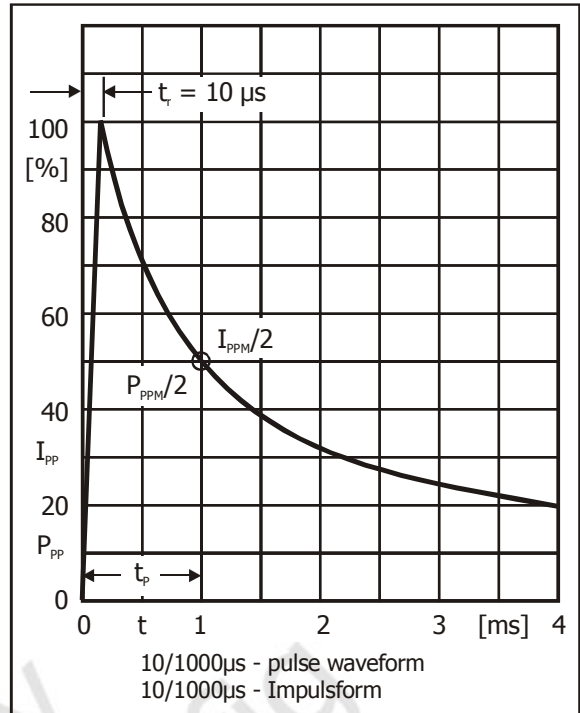
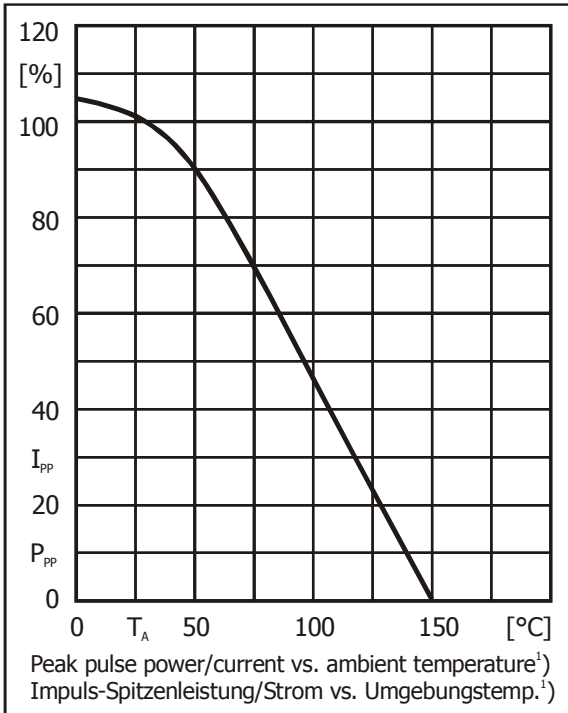
Höchstzulässiger Spitzenwert eines einmaligen Impulses, siehe Kurve  $I_{pp} = f(t)$  /  $P_{pp} = f(t)$

2 Unidirectional diodes only – Nur für unidirektionale Dioden

3 Mounted on P.C. board with 50 mm<sup>2</sup> copper pads at each terminal  
Montage auf Leiterplatte mit 50 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluss

**Maximum ratings (T<sub>A</sub> = 25°C)**
**Grenzwerte (T<sub>A</sub> = 25°C)**

Type Typ	Stand-off voltage Sperrspannung	Max. rev. current Max. Sperrstrom at / bei V <sub>WM</sub>	Breakdown voltage at I <sub>T</sub> = 1 mA Abbruch-Spannung bei I <sub>T</sub> = 1 mA ) I <sub>T</sub> = 10 mA		Max. clamping voltage Max. Begrenzer-Spannung at / bei I <sub>PPM</sub> (10/1000 μs)	
	V <sub>WM</sub> [V]	I <sub>D</sub> [μA]	V <sub>BR</sub> min [V]	V <sub>BR</sub> max [V]	V <sub>C</sub> [V]	I <sub>PPM</sub> [A]
3.0SMCJ5.0A	5.0	800	6.4 *)	7.2 *)	9.2	326.0
3.0SMCJ6.0A	6.0	800	6.6 *)	7.4 *)	10.3	291.2
3.0SMCJ6.5A	6.5	500	7.2 *)	8.0 *)	11.2	267.8
3.0SMCJ7.0A	7.0	200	7.8 *)	8.6 *)	12.0	250.0
3.0SMCJ7.5A	7.5	100	8.3	9.2	12.9	232.5
3.0SMCJ8.0A	8.0	50	8.9	9.9	13.6	220.5
3.0SMCJ8.5A	8.5	20	9.4	10.4	14.4	208.3
3.0SMCJ9.0A	9.0	10	10.0	11.1	15.4	194.8
3.0SMCJ10A	10	5	11.1	12.3	17.0	176.4
3.0SMCJ11A	11	2	12.2	13.5	18.2	164.8
3.0SMCJ12A	12	2	13.3	14.8	19.9	150.7
3.0SMCJ13A	13	2	14.4	16.0	21.5	139.5
3.0SMCJ14A	14	2	15.6	17.3	23.2	129.3
3.0SMCJ15A	15	2	16.7	18.6	24.4	122.9
3.0SMCJ16A	16	2	17.8	19.8	26.0	115.3
3.0SMCJ17A	17	2	18.9	21.0	27.6	108.7
3.0SMCJ18A	18	2	20.0	22.2	29.2	102.7
3.0SMCJ20A	20	2	22.2	24.6	32.4	92.5
3.0SMCJ22A	22	2	24.4	27.1	35.5	84.5
3.0SMCJ24A	24	2	26.7	29.6	38.9	77.1
3.0SMCJ26A	26	2	28.9	32.1	42.1	71.2
3.0SMCJ28A	28	2	31.1	34.5	45.4	66.0
3.0SMCJ30A	30	2	33.3	36.9	48.4	61.9
3.0SMCJ33A	33	2	36.7	40.7	53.3	56.2
3.0SMCJ36A	36	2	40.0	44.4	58.1	51.6
3.0SMCJ40A	40	2	44.4	49.3	64.5	46.5
3.0SMCJ43A	43	2	47.8	53.1	69.4	43.2
3.0SMCJ45A	45	2	50.0	55.5	72.7	41.2
3.0SMCJ48A	48	2	53.3	59.2	77.4	38.7
3.0SMCJ51A	51	2	56.7	62.9	82.4	36.4
3.0SMCJ54A	54	2	60.0	66.6	87.1	34.4
3.0SMCJ58A	58	2	64.4	71.5	93.6	32.0
3.0SMCJ60A	60	2	66.7	74.0	96.8	30.9
3.0SMCJ64A	64	2	71.1	78.9	103	29.1
3.0SMCJ70A	70	2	77.8	86.4	113	26.5
3.0SMCJ75A	75	2	83.3	92.5	121	24.7
3.0SMCJ78A	78	2	86.7	96.2	126	23.8
3.0SMCJ85A	85	2	94.4	105	137	21.9
3.0SMCJ90A	90	2	100	111	146	20.5
3.0SMCJ100A	100	2	111	123	162	18.5
3.0SMCJ110A	110	2	122	135	177	16.9
3.0SMCJ120A	120	2	133	148	193	15.5
3.0SMCJ130A	130	2	144	160	209	14.3
3.0SMCJ150A	150	2	167	185	243	12.3
3.0SMCJ160A	160	2	178	198	259	11.5
3.0SMCJ170A	170	2	189	210	275	10.9



1 Mounted on P.C. board with 25 mm<sup>2</sup> copper pads at each terminal  
 Montage auf Leiterplatte mit 25 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluss