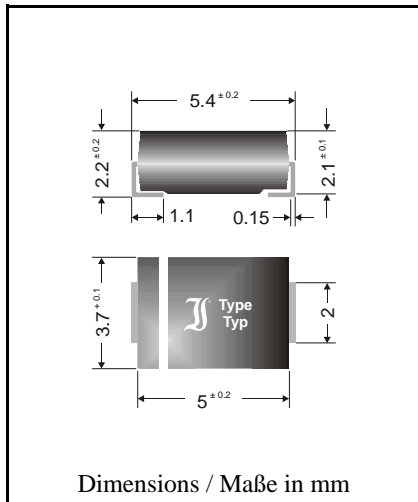


**Surface Mount
unidirectional and bidirectional
Transient Voltage Suppressor Diodes**

**Unidirektionale und bidirektionale
Spannungs-Begrenzer-Dioden
für die Oberflächenmontage**

Version 2004-10-01



Pulse power dissipation Impuls-Verlustleistung	600 W
Maximum stand-off voltage Maximale Sperrspannung	6.5...170 V
Plastic case Kunststoffgehäuse	~ SMB ~ DO-214AA
Weight approx. – Gewicht ca.	0.1 g
Plastic material has UL classification 94V-0 Gehäusematerial UL94V-0 klassifiziert	
Standard packaging taped and reeled Standard Lieferform gegurtet auf Rolle	

Suffix “C” or “CA” for bidirectional types

Suffix “C” oder “CA” für bidirektionale Typen

Maximum ratings and Characteristics

Grenz- und Kennwerte

Peak pulse power dissipation (10/1000 μ s waveform) Impuls-Verlustleistung (Strom-Impuls 10/1000 μ s)	$T_A = 25^\circ\text{C}$	P_{PPM}	600 W ¹⁾
Steady state power dissipation Verlustleistung im Dauerbetrieb	$T_T = 75^\circ\text{C}$	$P_{M(AV)}$	5 W
Peak forward surge current, 60 Hz half sine-wave Stoßstrom für eine 60 Hz Sinus-Halbwellen	$T_A = 25^\circ\text{C}$	I_{FSM}	100 A ²⁾
Max. instantaneous forward voltage Augenblickswert der Durchlaßspannung	$I_F = 25\text{ A}$	V_F	< 3.0 V ²⁾
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}	< 45 K/W ³⁾
Thermal resistance junction to terminal Wärmewiderstand Sperrschicht – Anschluß		R_{thT}	< 15 K/W

¹⁾ Non-repetitive pulse see curve $I_{PPM} = f(t_r) / P_{PPM} = f(t_r)$
Höchstzulässiger Spitzenwert eines einmaligen Impulses, siehe Kurve $I_{PPM} = f(t_r) / P_{PPM} = f(t_r)$
²⁾ Unidirectional diodes only – nur für unidirektionale Dioden
³⁾ Mounted on P.C. board with 50 mm² copper pads at each terminal
Montage auf Leiterplatte mit 50 mm² Kupferbelag (Löt-pad) an jedem Anschluß

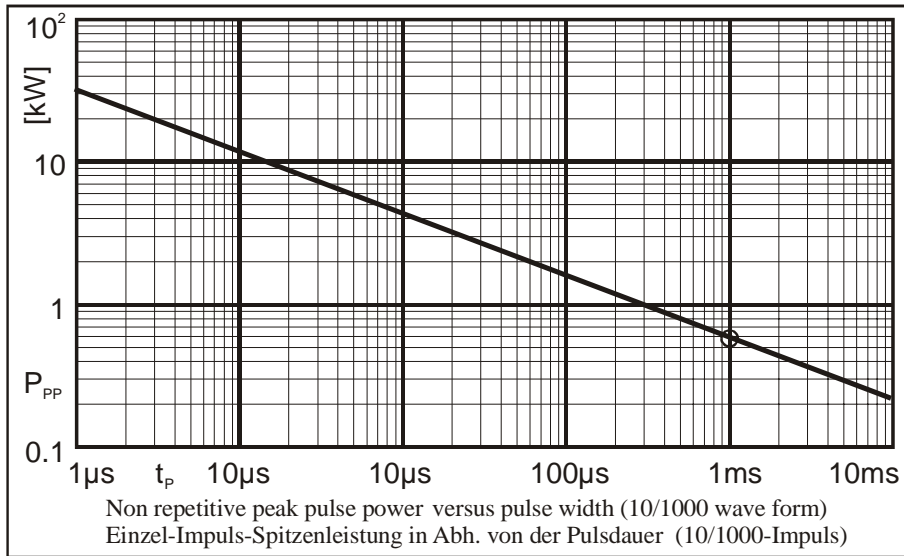
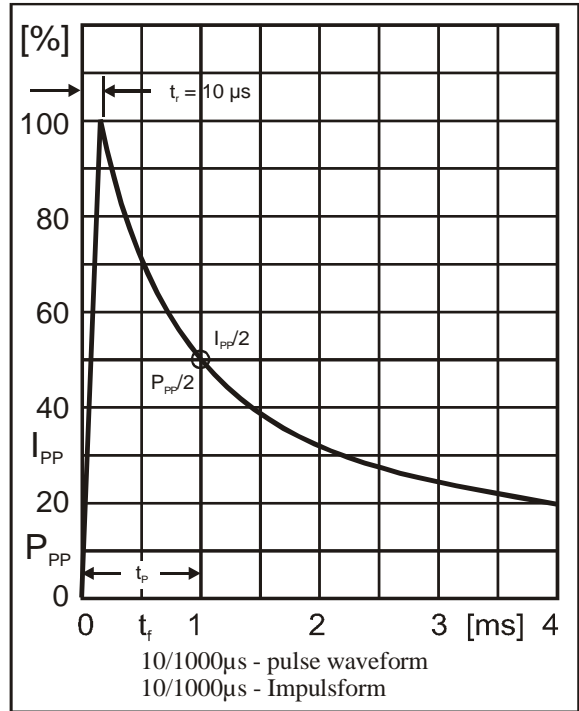
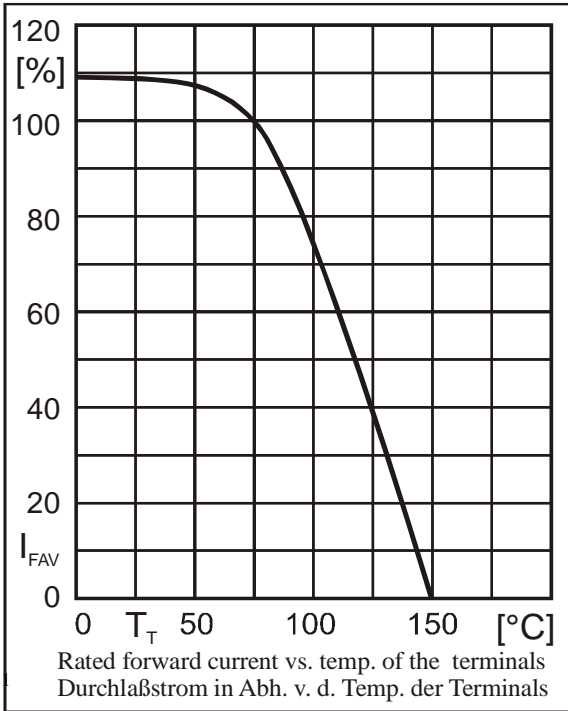
Maximum ratings
Grenzwerte

Type Typ	Stand-off voltage Sperrspanng	Max. rev. current Max. Sperrstrom at / bei V_{WM}	Breakdown voltage at $I_T = 1$ mA Abbruch-Spannung bei $I_T = 1$ mA) at / bei $I_T = 10$ mA		Max. clamping voltage Max. Begrenzer-Spanng at / bei I_{PPM} (10/1000 μ s)	
	V_{WM} [V]	I_D [μ A]	V_{BR} min. [V]	V_{BR} max. [V]	V_C [V]	I_{PPM} [A]
P6SMBJ6.5	6.5	500	7.2 *)	8.8 *)	12.3	48.8
P6SMBJ6.5A	6.5	500	7.2 *)	8.0 *)	11.2	53.6
P6SMBJ7.0	7.0	200	7.8 *)	9.5 *)	13.3	45.1
P6SMBJ7.0A	7.0	200	7.8 *)	8.7 *)	12.0	50.0
P6SMBJ7.5	7.5	100	8.3	10.1	14.3	42.0
P6SMBJ7.5A	7.5	100	8.3	9.2	12.9	46.5
P6SMBJ8.0	8.0	50	8.9	10.9	15.0	40.0
P6SMBJ8.0A	8.0	50	8.9	9.9	13.6	44.1
P6SMBJ8.5	8.5	10	9.4	11.5	15.9	37.7
P6SMBJ8.5A	8.5	10	9.4	10.4	14.4	41.7
P6SMBJ9.0	9.0	5	10.0	12.2	16.9	35.5
P6SMBJ9.0A	9.0	5	10.0	11.1	15.4	39.0
P6SMBJ10	10	5	11.1	13.5	18.8	31.9
P6SMBJ10A	10	5	11.1	12.3	17.0	35.3
P6SMBJ11	11	5	12.2	14.9	20.1	29.9
P6SMBJ11A	11	5	12.2	13.5	18.2	33.0
P6SMBJ12	12	5	13.3	16.2	22.0	27.3
P6SMBJ12A	12	5	13.3	14.8	19.9	30.2
P6SMBJ13	13	5	14.4	17.6	23.8	25.2
P6SMBJ13A	13	5	14.4	16.0	21.5	27.9
P6SMBJ14	14	5	15.6	19.0	25.8	23.3
P6SMBJ14A	14	5	15.6	17.3	23.2	25.9
P6SMBJ15	15	5	16.7	20.4	26.9	22.3
P6SMBJ15A	15	5	16.7	18.6	24.4	24.6
P6SMBJ16	16	5	17.8	21.7	28.8	20.8
P6SMBJ16A	16	5	17.8	19.8	26.0	23.1
P6SMBJ17	17	5	18.9	23.1	30.5	19.7
P6SMBJ17A	17	5	18.9	21.0	27.6	21.7
P6SMBJ18	18	5	20.0	24.4	32.2	18.6
P6SMBJ18A	18	5	20.0	22.2	29.2	20.5
P6SMBJ20	20	5	22.2	27.1	35.8	16.8
P6SMBJ20A	20	5	22.2	24.6	32.4	18.5
P6SMBJ22	22	5	24.4	29.8	39.4	15.2
P6SMBJ22A	22	5	24.4	27.1	35.5	16.9
P6SMBJ24	24	5	26.7	32.6	43.0	14.0
P6SMBJ24A	24	5	26.7	29.6	38.9	15.4
P6SMBJ26	26	5	28.9	35.3	46.6	12.9
P6SMBJ26A	26	5	28.9	32.1	42.1	14.3
P6SMBJ28	28	5	31.1	37.9	50.0	12.0
P6SMBJ28A	28	5	31.1	34.5	45.4	13.2
P6SMBJ30	30	5	33.3	40.1	53.5	11.2
P6SMBJ30A	30	5	33.3	36.9	48.4	12.4
P6SMBJ33	33	5	36.7	44.8	59.0	10.2
P6SMBJ33A	33	5	36.7	40.7	53.3	11.3

Maximum ratings

Grenzwerte

Type Typ	Stand-off voltage Sperrspannung	Max. rev. current Max. Sperrstrom at / bei V_{WM}	Breakdown voltage at $I_T = 1 \text{ mA}$ Abbruch-Spannung bei $I_T = 1 \text{ mA}$		Max. clamping voltage Max. Begrenzer-Spannung at / bei $I_{PPM} (10/1000\mu\text{s})$	
	V_{WM} [V]	I_D [μA]	V_{BR} min. [V]	V_{BR} max. [V]	V_C [V]	I_{PPM} [A]
P6SMBJ 36	36	5	40.0	48.8	64.3	9.3
P6SMBJ 36A	36	5	40.0	44.4	58.1	10.3
P6SMBJ 40	40	5	44.4	54.2	71.4	8.4
P6SMBJ 40A	40	5	44.4	49.3	64.5	9.3
P6SMBJ 43	43	5	47.8	58.3	76.7	7.8
P6SMBJ 43A	43	5	47.8	53.1	69.4	8.6
P6SMBJ 45	45	5	50.0	61.0	80.3	7.5
P6SMBJ 45A	45	5	50.0	55.5	72.7	8.3
P6SMBJ 48	48	5	53.3	65.0	85.5	7.0
P6SMBJ 48A	48	5	53.3	59.2	77.4	7.8
P6SMBJ 51	51	5	56.7	69.2	91.1	6.6
P6SMBJ 51A	51	5	56.7	62.9	82.4	7.3
P6SMBJ 54	54	5	60.0	73.2	96.3	6.2
P6SMBJ 54A	54	5	60.0	66.6	87.1	6.9
P6SMBJ 58	58	5	64.4	78.6	103	5.8
P6SMBJ 58A	58	5	64.4	71.5	93.6	6.4
P6SMBJ 60	60	5	66.7	81.4	107	5.6
P6SMBJ 60A	60	5	66.7	74.0	96.8	6.2
P6SMBJ 64	64	5	71.1	86.7	114	5.3
P6SMBJ 64A	64	5	71.1	78.9	103	5.8
P6SMBJ 70	70	5	77.8	94.9	125	4.8
P6SMBJ 70A	70	5	77.8	86.4	113	5.3
P6SMBJ 75	75	5	83.3	102	134	4.5
P6SMBJ 75A	75	5	83.3	92.5	121	5.0
P6SMBJ 78	78	5	86.7	106	139	4.3
P6SMBJ 78A	78	5	86.7	96.2	126	4.8
P6SMBJ 85	85	5	94.4	115	151	4.0
P6SMBJ 85A	85	5	94.4	105	137	4.4
P6SMBJ 90	90	5	100	122	160	3.8
P6SMBJ 90A	90	5	100	111	146	4.1
P6SMBJ 100	100	5	111	135	179	3.4
P6SMBJ 100A	100	5	111	123	162	3.7
P6SMBJ 110	110	5	122	149	196	3.1
P6SMBJ 110A	110	5	122	135	177	3.4
P6SMBJ 120	120	5	133	162	214	2.8
P6SMBJ 120A	120	5	133	148	193	3.1
P6SMBJ 130	130	5	144	176	231	2.6
P6SMBJ 130A	130	5	144	160	209	2.9
P6SMBJ 150	150	5	167	204	268	2.2
P6SMBJ 150A	150	5	167	185	243	2.5
P6SMBJ 160	160	5	178	217	287	2.1
P6SMBJ 160A	160	5	178	198	259	2.3
P6SMBJ 170	170	5	189	231	304	2.0
P6SMBJ 170A	170	5	189	210	275	2.2



For bidirectional types (suffix “C” or “CA”) electrical characteristics apply in both directions
Für bidirektionale Dioden (Suffix “C” oder “CA”) gelten die el. Werte in beiden Richtungen

¹⁾ Mounted on P.C. board with 50 mm² copper pads at each terminal
Montage auf Leiterplatte mit 50 mm² Kupferbelag (Löt-pad) an jedem Anschluß