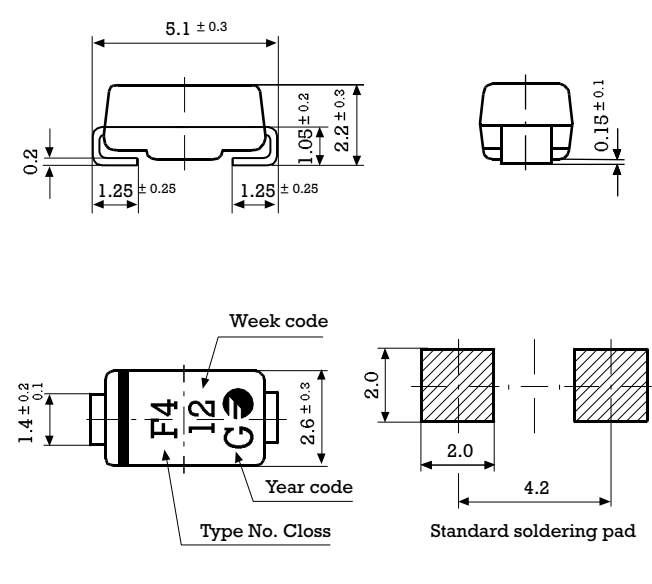


400 W Unidirectional and Bidirectional Surface Mounted Transient Voltage Suppressor Diodes

Dimensions in mm.  CASE: SMA/DO-214AC	Voltage 6.8 to 220 V Power 400 W/ms HYPERECTIFIER® • Glass passivated junction • Typical I_{RM} less than $1\mu A$ above 10V • Response time typically < 1ns. • The plastic material carries UL 94 V-0 • Low profile package • Easy pick and place • High temperature soldering 260 °C 10 sec MECHANICAL DATA Terminals: Solder plated, solderable per IEC 68-2-20. Standard Packaging: 4 mm. tape (EIA-RS-481). Weight: 0.064 g.
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Maximum Ratings and Electrical Characteristics at 25 °C

P_{PPM}	Peak Pulse Power Dissipation with 10/1000 μs exponential pulse	400 W
I_{FSM}	Peak Forward Surge Current 8.3 ms. (Jedec Method) (Note 1)	40 A
V_F	Max. forward voltage drop at $I_F = 50 A$ (Note 1)	3.5 V
$T_J - T_{STG}$	Operating Junction and Storage Temperature Range	- 65 to + 175 °C

Note 1: Only for Unidirectional

Type		Maximum Reverse Leakage Current I_{RM} at V_{RM}		(1) Breakdown Voltage V_{BR} at I_R (V)				Max. Clamping Voltage V_{CL} at I_{PP} max. 1ms. Expo.	
Unidirectional	Marking Code	(μA)	(V)	Min.	Nom.	Max.	(mA)	(V)	(A)
P4SMA6V8	AD	1000	5.50	6.12	6.8	7.48	10	10.8	38
P4SMA6V8A	AE	1000	5.80	6.45	6.8	7.14	10	10.5	40
P4SMA7V5	AF	500	6.05	6.75	7.5	8.25	10	11.7	36
P4SMA7V5A	AG	500	6.40	7.13	7.5	7.88	10	11.3	37
P4SMA8V2	AH	200	6.63	7.38	8.2	9.02	10	12.5	33
P4SMA8V2A	AK	200	7.02	7.79	8.2	8.61	10	12.1	35
P4SMA9V1	AL	50	7.37	8.19	9.1	10.0	1	13.8	30
P4SMA9V1A	AM	50	7.78	8.65	9.1	9.55	1	13.4	31
P4SMA10	AN	10	8.10	9.00	10	11.0	1	15.0	28
P4SMA10A	AP	10	8.55	9.50	10	10.5	1	14.5	29
P4SMA11	AQ	5	8.92	9.90	11	12.1	1	16.2	26
P4SMA11A	AR	5	9.40	10.5	11	11.6	1	15.6	27
P4SMA12	AS	5	9.72	10.8	12	13.2	1	17.3	24
P4SMA12A	AT	5	10.2	11.4	12	12.6	1	16.7	25
P4SMA13	AU	5	10.5	11.7	13	14.3	1	19.0	22
P4SMA13A	AV	5	11.1	12.4	13	13.7	1	18.2	23
P4SMA15	AW	5	12.1	13.5	15	16.5	1	22.0	19
P4SMA15A	AX	5	12.8	14.3	15	15.8	1	21.2	20
P4SMA16	AY	5	12.9	14.4	16	17.6	1	23.5	18
P4SMA16A	AZ	5	13.6	15.2	16	16.8	1	22.5	19
P4SMA18	BD	5	14.5	16.2	18	19.8	1	26.5	16
P4SMA18A	BE	5	15.3	17.1	18	18.9	1	25.5	17
P4SMA20	BF	5	16.2	18.0	20	22.0	1	29.1	14
P4SMA20A	BG	5	17.1	19.0	20	21.0	1	27.7	15
P4SMA22	BH	5	17.8	19.8	22	24.2	1	31.9	13
P4SMA22A	BK	5	18.8	20.9	22	23.1	1	30.6	14
P4SMA24	BL	5	19.4	21.6	24	26.4	1	34.7	12
P4SMA24A	BM	5	20.5	22.8	24	25.2	1	33.2	13
P4SMA27	BN	5	21.8	24.3	27	29.7	1	39.1	11
P4SMA27A	BP	5	23.1	25.7	27	28.4	1	37.5	11.2
P4SMA30	BQ	5	24.3	27.0	30	33.0	1	43.5	10
P4SMA30A	BR	5	25.6	28.5	30	31.5	1	41.4	10
P4SMA33	BS	5	26.8	29.7	33	36.3	1	47.7	9
P4SMA33A	BT	5	28.2	31.4	33	34.7	1	45.7	9
P4SMA36	BU	5	29.1	32.4	36	39.6	1	52.0	8
P4SMA36A	BV	5	30.8	34.2	36	37.8	1	49.9	8.4
P4SMA39	BW	5	31.6	35.1	39	42.9	1	56.4	7.4
P4SMA39A	BX	5	33.3	37.1	39	41.0	1	53.9	7.8

(1) Tested with pulses.

Pulse test: $t_p \leq 50$ ms; $d < 2\%$

Type		Maximum Reverse Leakage Current I_{RM} at V_{RM}		(1) Breakdown Voltage V_{BR} at I_R (V)				Max. Clamping Voltage V_{CL} at I_{PP} max. 1 ms. Expo.	
Unidirectional	Marking Code	(μA)	(V)	Min.	Nom.	Max.	(mA)	(V)	(A)
P4SMA43	BY	5	34.8	38.7	43	47.3	1	61.9	6.8
P4SMA43A	BZ	5	36.8	40.9	43	45.2	1	59.3	7.1
P4SMA47	CD	5	38.1	42.3	47	51.7	1	67.8	6.2
P4SMA47A	CE	5	40.2	44.7	47	49.4	1	64.8	5.0
P4SMA51	CF	5	41.3	45.9	51	56.1	1	73.5	5.7
P4SMA51A	CG	5	43.6	48.5	51	53.6	1	70.1	6.0
P4SMA56	CH	5	45.4	50.4	56	61.6	1	80.5	5.2
P4SMA56A	CK	5	47.8	53.2	56	58.8	1	77.0	5.5
P4SMA62	CL	5	50.2	55.8	62	68.2	1	89.0	4.7
P4SMA62A	CM	5	53.0	58.9	62	65.1	1	85.0	5.0
P4SMA68	CN	5	55.1	61.2	68	74.8	1	98.0	4.3
P4SMA68A	CP	5	58.1	64.6	68	71.4	1	92.0	4.6
P4SMA75	CQ	5	60.7	67.5	75	82.5	1	108	3.9
P4SMA75A	CR	5	64.1	71.3	75	78.8	1	103	4.1
P4SMA82	CS	5	66.4	73.8	82	90.2	1	118	3.6
P4SMA82A	CT	5	70.1	77.9	82	86.1	1	113	3.7
P4SMA91	CU	5	73.7	81.9	91	100	1	131	3.2
P4SMA91A	CV	5	77.8	86.5	91	95.5	1	125	3.4
P4SMA100	CW	5	81.0	90.0	100	110	1	144	2.9
P4SMA100A	CX	5	85.5	95.0	100	105	1	137	3.1
P4SMA110	CY	5	89.2	99.0	110	121	1	158	2.7
P4SMA110A	CZ	5	94.0	105	110	116	1	152	2.8
P4SMA120	DD	5	97.2	108	120	132	1	173	2.4
P4SMA120A	DE	5	102	114	120	126	1	165	2.5
P4SMA130	DF	5	105	117	130	143	1	187	2.2
P4SMA130A	DG	5	111	124	130	137	1	179	2.3
P4SMA150	DH	5	121	135	150	165	1	215	2.0
P4SMA150A	DL	5	128	143	150	158	1	207	2.0
P4SMA160	DM	5	130	144	160	176	1	230	1.8
P4SMA160A	DN	5	136	152	160	168	1	219	1.9
P4SMA170	DP	5	138	153	170	187	1	244	1.7
P4SMA170A	DQ	5	145	162	170	179	1	234	1.8
P4SMA180	DR	5	146	162	180	198	1	258	1.6
P4SMA180A	DS	5	154	171	180	189	1	246	1.7
P4SMA200	DT	5	162	180	200	220	1	287	1.5
P4SMA200A	DU	5	171	190	200	210	1	274	1.53
P4SMA220	DV	5	175	198	220	242	1	344	1.16
P4SMA220A	DX	5	185	209	220	231	1	328	1.22

(1) Tested with pulses.

Pulse test: $t_p \leq 50$ ms; $d < 2\%$

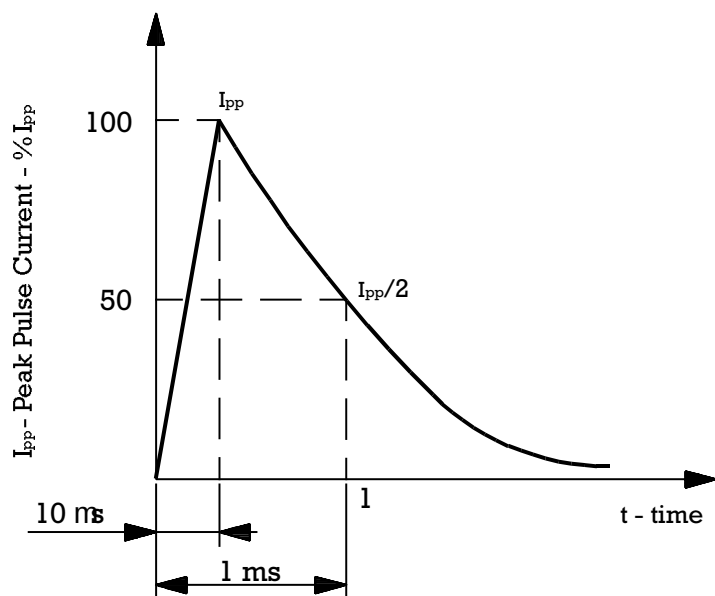
Type		Maximum Reverse Leakage Current		(1) Breakdown Voltage				Max. Clamping Voltage	
		I_{RM}	at V_{RM}	V_{BR}	at I_R	V_{CL}	at I_{PP}	max. 1ms. Expo.	
Bidirectional	Marking Code	(μA)	(V)	Min.	Nom.	Max.	(mA)	(V)	(A)
P4SMA6V8C	RA	1000	5.50	6.12	6.8	7.48	10	10.8	38
P4SMA7V5C	RC	500	6.05	6.75	7.5	8.25	10	11.7	36
P4SMA8V2C	RE	200	6.63	7.38	8.2	9.02	10	12.5	33
P4SMA9V1C	RG	50	7.37	8.19	9.1	10.0	1	13.8	30
P4SMA10C	RI	10	8.10	9.00	10	11.0	1	15.0	28
P4SMA11C	RK	5	8.92	9.90	11	12.1	1	16.2	26
P4SMA12C	RM	5	9.72	10.8	12	13.2	1	17.3	24
P4SMA13C	RO	5	10.5	11.7	13	14.3	1	19.0	22
P4SMA15C	RR	5	12.1	13.5	15	16.5	1	22.0	19
P4SMA16C	RT	5	12.9	14.4	16	17.6	1	23.5	18
P4SMA18C	RV	5	14.5	16.2	18	19.8	1	26.5	16
P4SMA20C	RX	5	16.2	18.0	20	22.0	1	29.1	14
P4SMA22C	RZ	5	17.8	19.8	22	24.2	1	31.9	13
P4SMA24C	SB	5	19.4	21.6	24	26.4	1	34.7	12
P4SMA27C	SD	5	21.8	24.3	27	29.7	1	39.1	11
P4SMA30C	SF	5	24.3	27.0	30	33.0	1	43.5	10
P4SMA33C	SH	5	26.8	29.7	33	36.3	1	47.7	9
P4SMA36C	SJ	5	29.1	32.4	36	39.6	1	52.0	8
P4SMA39C	SL	5	31.6	35.1	39	42.9	1	56.4	7.4
P4SMA43C	SN	5	34.8	38.7	43	47.3	1	61.9	6.8
P4SMA47C	SP	5	38.1	42.3	47	51.7	1	67.8	6.2
P4SMA51C	SS	5	41.3	45.9	51	56.1	1	73.5	5.7
P4SMA56C	ST	5	45.4	50.4	56	61.6	1	80.5	5.2
P4SMA62C	SU	5	50.2	55.8	62	68.2	1	89.0	4.7
P4SMA68C	SW	5	55.1	61.2	68	74.8	1	98.0	4.3
P4SMA75C	SY	5	60.7	67.5	75	82.5	1	108	3.9
P4SMA82C	WA	5	66.4	73.8	82	90.2	1	118	3.6
P4SMA91C	WC	5	73.7	81.9	91	100	1	131	3.2
P4SMA100C	WE	5	81.0	90.0	100	110	1	144	2.9
P4SMA110C	WG	5	89.2	99.0	110	121	1	158	2.7
P4SMA120C	WI	5	97.2	108	120	132	1	173	2.4
P4SMA130C	WK	5	105	117	130	143	1	187	2.2
P4SMA150C	WM	5	121	135	150	165	1	215	2.0
P4SMA160C	WO	5	130	144	160	176	1	230	1.8
P4SMA170C	WR	5	138	153	170	187	1	244	1.7
P4SMA180C	WT	5	146	162	180	198	1	258	1.6
P4SMA200C	WV	5	162	180	200	220	1	287	1.5
P4SMA220C	WX	5	175	198	220	242	1	344	1.16

(1) Tested with pulses.

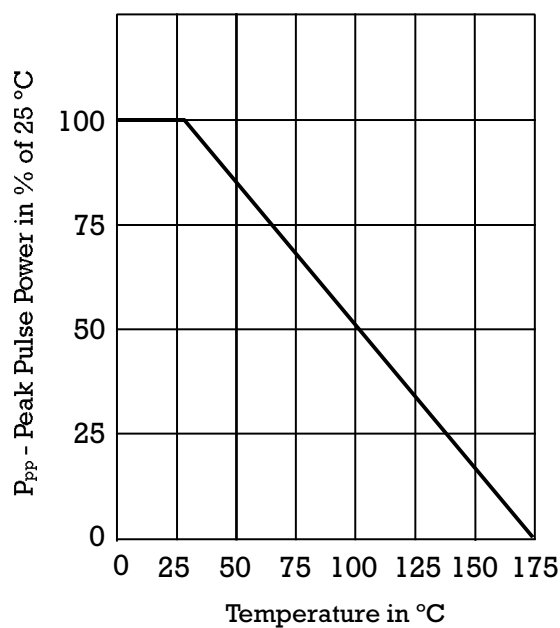
Pulse test: $t_p \leq 50$ ms; $d < 2\%$

Rating And Characteristic Curves

DERATING CURVE



Pulse wave form 10/1000



PEAK PULSE POWER RATING CURVE

