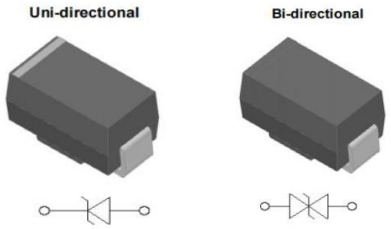
Transient Voltage Suppressors

FEATURES：

- For surface mounted applications
- 600W peak pulse power capability on 10/1000μs waveform
- Low incremental surge resistance, excellent clamping capability
- Very fast response time
- High temperature soldering guaranteed: 260℃/10 seconds
- RoHS compliant.



DO-214AA

MECHANICAL DATA：

- Case：Molded plastic body
- Polarity：Polarity symbol marking on body

MAXIMUM RATINGS (Ratings at 25 ℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A=25ºC by 10x1000μs waveform	P_{PPM}	600	W
Power Dissipation on infinite heat sink at T_A=50℃	$P_{M(AV)}$	5	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave	I_{FSM}	100	A
Maximum Instantaneous Forward Voltage at 0.2A for Unidirectional	V_F	1.2	V
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	°C
Typical Thermal Resistance Junction to Lead	R_{Ujl}	20	°C/W
Typical Thermal Resistance Junction to Ambient	R_{uJA}	100	°C/W

Electrical Characteristics

P/N		Marking		VR (V)	VBR @ IT (V)		IT (mA)	IR@ VR (μA)		Ipp (A)	VC@ Ipp (V)
Uni	Bi	Uni	Bi		MIN	MAX		Uni	Bi		
SMBJ5.0A	SMBJ5.0CA	KE	AE	5	6.4	7	10	200	400	65.3	9.2
SMBJ6.0A	SMBJ6.0CA	KG	AG	6	6.67	7.37	10	200	400	58.3	10.3
SMBJ6.5A	SMBJ6.5CA	KK	AK	6.5	7.22	7.98	10	50	80	53.6	11.2
SMBJ7.0A	SMBJ7.0CA	KM	AM	7	7.78	8.6	10	50	80	50	12
SMBJ7.5A	SMBJ7.5CA	KP	AP	7.5	8.33	9.21	1	5	40	46.6	12.9
SMBJ8.0A	SMBJ8.0CA	KR	AR	8	8.89	9.83	1	3	4	44.2	13.6
SMBJ8.5A	SMBJ8.5CA	KT	AT	8.5	9.44	10.4	1	2	8	41.7	14.4
SMBJ9.0A	SMBJ9.0CA	KV	AV	9	10	11.1	1	1	2.5	39	15.4
SMBJ10A	SMBJ10CA	KX	AX	10	11.1	12.3	1	1	1	35.3	17
SMBJ11A	SMBJ11CA	KZ	AZ	11	12.2	13.5	1	1	1	33	18.2
SMBJ12A	SMBJ12CA	LE	BE	12	13.3	14.7	1	1	1	30.2	19.9
SMBJ13A	SMBJ13CA	LG	BG	13	14.4	15.9	1	1	1	28	21.5
SMBJ14A	SMBJ14CA	LK	BK	14	15.6	17.2	1	1	1	25.9	23.2
SMBJ15A	SMBJ15CA	LM	BM	15	16.7	18.5	1	1	1	24.6	24.4
SMBJ16A	SMBJ16CA	LP	BP	16	17.8	19.7	1	1	1	23.1	26
SMBJ17A	SMBJ17CA	LR	BR	17	18.9	20.9	1	1	1	21.8	27.6
SMBJ18A	SMBJ18CA	LT	BT	18	20	22.1	1	1	1	20.6	29.2
SMBJ20A	SMBJ20CA	LV	BV	20	22.2	24.5	1	1	1	18.6	32.4
SMBJ22A	SMBJ22CA	LX	BX	22	24.4	26.9	1	1	1	16.9	35.5
SMBJ24A	SMBJ24CA	LZ	BZ	24	26.7	29.5	1	1	1	15.5	38.9
SMBJ26A	SMBJ26CA	ME	CE	26	28.9	31.9	1	1	1	14.3	42.1
SMBJ28A	SMBJ28CA	MG	CG	28	31.1	34.4	1	1	1	13.3	45.4
SMBJ30A	SMBJ30CA	MK	CK	30	33.3	36.8	1	1	1	12.4	48.4
SMBJ33A	SMBJ33CA	MM	CM	33	36.7	40.6	1	1	1	11.3	53.3
SMBJ36A	SMBJ36CA	MP	CP	36	40	44.2	1	1	1	10.4	58.1
SMBJ40A	SMBJ40CA	MR	CR	40	44.4	49.1	1	1	1	9.3	64.5
SMBJ43A	SMBJ43CA	MT	CT	43	47.8	52.8	1	1	1	8.7	69.4
SMBJ45A	SMBJ45CA	MV	CV	45	50	55.3	1	1	1	8.3	72.7
SMBJ48A	SMBJ48CA	MX	CX	48	53.3	58.9	1	1	1	7.8	77.4
SMBJ51A	SMBJ51CA	MZ	CZ	51	56.7	62.7	1	1	1	7.3	82.4
SMBJ54A	SMBJ54CA	NE	DE	54	60	66.3	1	1	1	6.9	87.1
SMBJ58A	SMBJ58CA	NG	DG	58	64.4	71.2	1	1	1	6.5	93.6
SMBJ60A	SMBJ60CA	NK	DK	60	66.7	73.7	1	1	1	6.2	96.8
SMBJ64A	SMBJ64CA	NM	DM	64	71.1	78.6	1	1	1	5.9	103
SMBJ70A	SMBJ70CA	NP	DP	70	77.8	86	1	1	1	5.3	113
SMBJ75A	SMBJ75CA	NR	DR	75	83.3	92.1	1	1	1	5	121
SMBJ78A	SMBJ78CA	NT	DT	78	86.7	95.8	1	1	1	4.8	126
SMBJ85A	SMBJ85CA	NV	DV	85	94.4	104	1	1	1	4.4	137
SMBJ90A	SMBJ90CA	NX	DX	90	100	111	1	1	1	4.1	146
SMBJ100A	SMBJ100CA	NZ	DZ	100	111	123	1	1	1	3.7	162
SMBJ110A	SMBJ110CA	PE	EE	110	122	135	1	1	1	3.4	177
SMBJ120A	SMBJ120CA	PG	EG	120	133	147	1	1	1	3.1	193
SMBJ130A	SMBJ130CA	PK	EK	130	144	159	1	1	1	2.9	209
SMBJ150A	SMBJ150CA	PM	EM	150	167	185	1	1	1	2.5	243
SMBJ160A	SMBJ160CA	PP	EP	160	178	197	1	1	1	2.3	259
SMBJ170A	SMBJ170CA	PR	ER	170	189	209	1	1	1	2.2	275
SMBJ180A	SMBJ180CA	PT	ET	180	201	222	1	1	1	2.1	292
SMBJ200A	SMBJ200CA	PV	EV	200	224	247	1	1	1	1.9	324
SMBJ220A	SMBJ220CA	PX	EX	220	246	272	1	1	1	1.7	356
SMBJ250A	SMBJ250CA	PZ	EZ	250	279	309	1	1	1	1.5	405

SMBJ300A*	SMBJ300CA*	QE	FE	300	335	371	1	1	1	1.3	486
SMBJ350A*	SMBJ350CA*	QG	FG	350	391	432	1	1	1	1.1	567
SMBJ400A*	SMBJ400CA*	QK	FK	400	447	494	1	1	1	0.9	648
SMBJ440A*	SMBJ440CA*	QM	FM	440	492	543	1	1	1	0.9	713

Notes： For stack-die parts, use * to label the part number.

Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

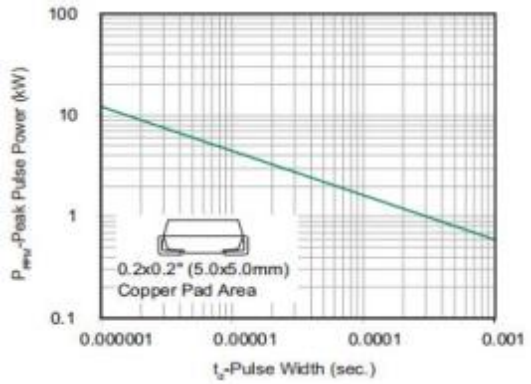


Figure 1. Peak Pulse Power Rating Curve

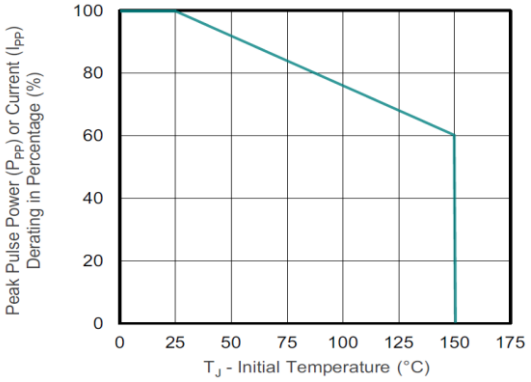


Figure 2. Pulse Derating Curve

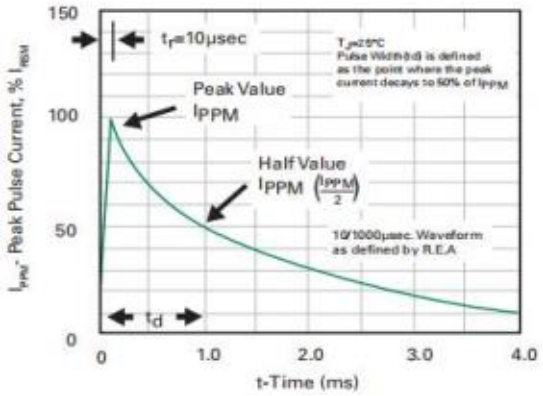


Figure 3. Pulse Waveform

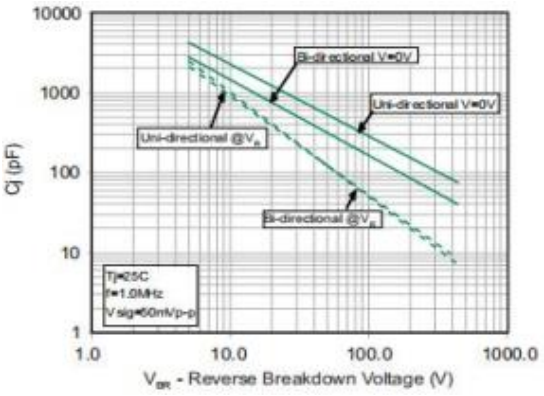


Figure 4. Typical Junction Capacitance

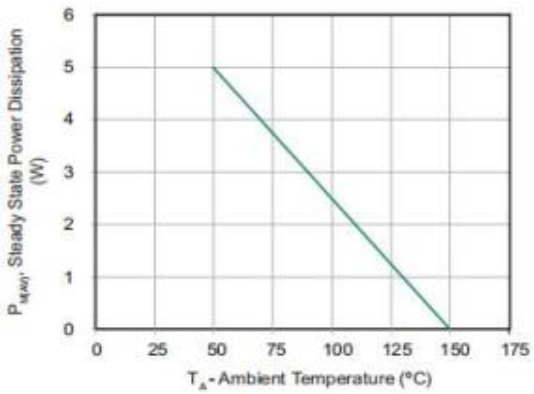


Figure 5. Steady State Power Dissipation Derating Curve

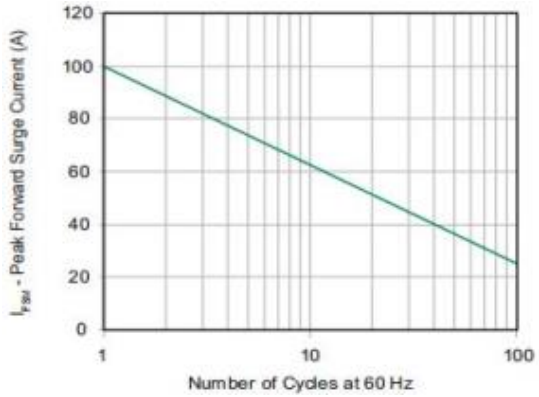
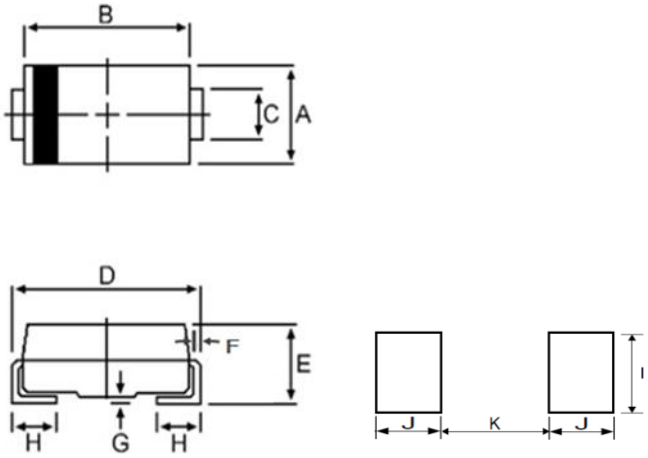


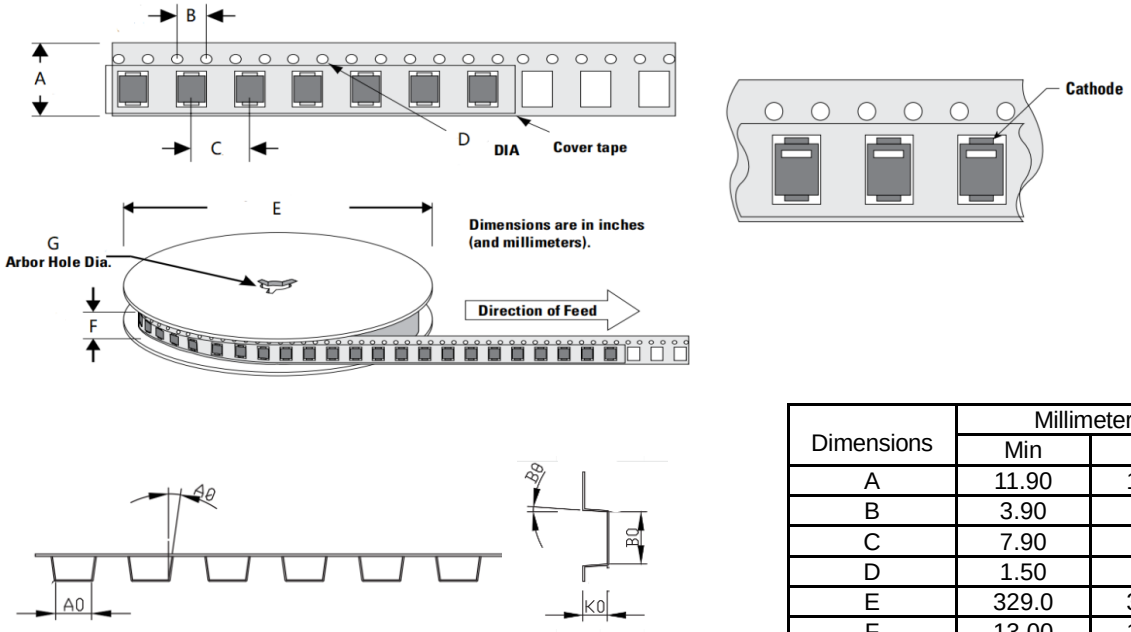
Figure 6. Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

- DO-214AA Package outlines : Dimensions in millimeters



Dimensions	Millimeters	
	Min	Max
A	3.30	3.94
B	4.06	4.60
C	1.80	2.20
D	4.90	5.60
E	2.00	2.60
F	0.152	0.305
G	0.00	0.203
H	0.75	1.55
I	2.18	
J	1.52	
K		2.25

- Tape & Reel Information



Dimensions	Millimeters	
	Min	Max
A	11.90	12.30
B	3.90	4.10
C	7.90	8.10
D	1.50	1.60
E	329.0	331.0
F	13.00	14.50
G	13.00	14.50
A0	3.66	3.86
B0	5.59	5.79
K0	2.57	2.77
Aθ	--	8^{o}
Bθ	--	4^{o}

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