

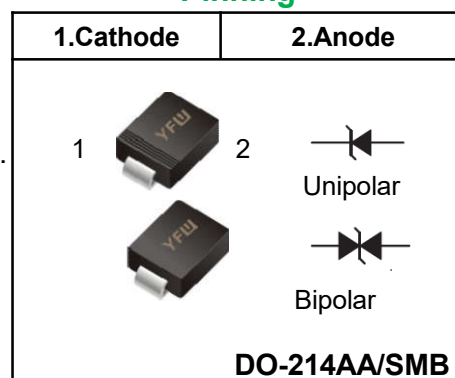
Surface mount transient voltage suppressor power 600 watts

Stand-Off Voltage: 5.0V~440V

FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package.
- Glass passivated junction.
- Low inductance.
- Plastic package has Underwriters Laboratory Flammability.

Pinning



MECHANICAL DATA

- Case: DO-214AA/SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.1g / 0.0034oz

Maximum Ratings and Electrical characteristics

Ratings at 25 ambient temperature unless o °C therwise specified.

Parameter		Symbol	Value	Unit
Peak Pulse Power Dissipation on TA=25°C (Note 1,2,5, Fig1)		P _{PPM}	600	W
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3, Fig4).		I _{FSM} (UNI)	100	A
Peak Pulse Current on 10/1000 us waveform (Note 1) Fig 3		I _{PPM}	see Table 1	A
ESD Voltage per IEC6100-4-2	Contact	V _{ESD1}	±30	kV
	Air	V _{ESD2}	±30	
Typical Junction Capacitance at VR=4V, f=1MHz		C _j	390	pF
Typical Thermal Resistance Junction to Ambient(Note 2)		R _{θJA}	100	°C/W
Operating Junction Temperature and Storage Temperature Range		T _J ,T _{STG}	-65 to +150	°C

NOTES:

- Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig. 2.
- Mounted on 5mm² copper pads to each terminal.
- Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
- Peak pulse power waveform is 10/1000μS.

Characteristics at Ta = 25°C

Type		Marking		V _{RMW}	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max.Clamp Voltage	Max. Peak Pulse Current
					V _{BR} @ I _T		I _T	I _{R@VR}	V _c @ I _{PP}	I _{PP}
					Min	Max				
UNI	BI	UNI	BI	V	V	V	mA	μA	V	A
SMBJ5.0A	SMBJ5.0CA	KE	AE	5	6.4	7	10	800	9.2	65.3
SMBJ6.0A	SMBJ6.0CA	KG	AG	6	6.67	7.37	10	800	10.3	58.3
SMBJ6.5A	SMBJ6.5CA	KK	AK	6.5	7.22	7.98	10	500	11.2	53.6
SMBJ7.0A	SMBJ7.0CA	KM	AM	7	7.78	8.6	10	200	12	50
SMBJ7.5A	SMBJ7.5CA	KP	AP	7.5	8.33	9.21	1	100	12.9	46.6
SMBJ8.0A	SMBJ8.0CA	KR	AR	8	8.89	9.83	1	50	13.6	44.2
SMBJ8.5A	SMBJ8.5CA	KT	AT	8.5	9.44	10.4	1	20	14.4	41.7
SMBJ9.0A	SMBJ9.0CA	KV	AV	9	10	11.1	1	10	15.4	39
SMBJ10A	SMBJ10CA	KX	AX	10	11.1	12.3	1	5	17	35.3
SMBJ11A	SMBJ11CA	KZ	AZ	11	12.2	13.5	1	1	18.2	33
SMBJ12A	SMBJ12CA	LE	BE	12	13.3	14.7	1	1	19.9	30.2
SMBJ13A	SMBJ13CA	LG	BG	13	14.4	15.9	1	1	21.5	28
SMBJ14A	SMBJ14CA	LK	BK	14	15.6	17.2	1	1	23.2	25.9
SMBJ15A	SMBJ15CA	LM	BM	15	16.7	18.5	1	1	24.4	24.6
SMBJ16A	SMBJ16CA	LP	BP	16	17.8	19.7	1	1	26	23.1
SMBJ17A	SMBJ17CA	LR	BR	17	18.9	20.9	1	1	27.6	21.8
SMBJ18A	SMBJ18CA	LT	BT	18	20	22.1	1	1	29.2	20.6
SMBJ20A	SMBJ20CA	LV	BV	20	22.2	24.5	1	1	32.4	18.6
SMBJ22A	SMBJ22CA	LX	BX	22	24.4	26.9	1	1	35.5	16.9
SMBJ24A	SMBJ24CA	LZ	BZ	24	26.7	29.5	1	1	38.9	15.5
SMBJ26A	SMBJ26CA	ME	CE	26	28.9	31.9	1	1	42.1	14.3
SMBJ28A	SMBJ28CA	MG	CG	28	31.1	34.4	1	1	45.4	13.3
SMBJ30A	SMBJ30CA	MK	CK	30	33.3	36.8	1	1	48.4	12.4
SMBJ33A	SMBJ33CA	MM	CM	33	36.7	40.6	1	1	53.3	11.3
SMBJ36A	SMBJ36CA	MP	CP	36	40	44.2	1	1	58.1	10.4
SMBJ40A	SMBJ40CA	MR	CR	40	44.4	49.1	1	1	64.5	9.3
SMBJ43A	SMBJ43CA	MT	CT	43	47.8	52.8	1	1	69.4	8.7
SMBJ45A	SMBJ45CA	MV	CV	45	50	55.3	1	1	72.7	8.3
SMBJ48A	SMBJ48CA	MX	CX	48	53.3	58.9	1	1	77.4	7.8
SMBJ51A	SMBJ51CA	MZ	CZ	51	56.7	62.7	1	1	82.4	7.3
SMBJ54A	SMBJ54CA	NE	DE	54	60	66.3	1	1	87.1	6.9
SMBJ58A	SMBJ58CA	NG	DG	58	64.4	71.2	1	1	93.6	6.5
SMBJ60A	SMBJ60CA	NK	DK	60	66.7	73.7	1	1	96.8	6.2
SMBJ64A	SMBJ64CA	NM	DM	64	71.1	78.6	1	1	103	5.9
SMBJ70A	SMBJ70CA	NP	DP	70	77.8	86	1	1	113	5.3
SMBJ75A	SMBJ75CA	NR	DR	75	83.3	92.1	1	1	121	5
SMBJ78A	SMBJ78CA	NT	DT	78	86.7	95.8	1	1	126	4.8
SMBJ85A	SMBJ85CA	NV	DV	85	94.4	104	1	1	137	4.4
SMBJ90A	SMBJ90CA	NX	DX	90	100	111	1	1	146	4.1
SMBJ100A	SMBJ100CA	NZ	DZ	100	111	123	1	1	162	3.7
SMBJ110A	SMBJ110CA	PE	EE	110	122	135	1	1	177	3.4
SMBJ120A	SMBJ120CA	PG	EG	120	133	147	1	1	193	3.1
SMBJ130A	SMBJ130CA	PK	EK	130	144	159	1	1	209	2.9
SMBJ150A	SMBJ150CA	PM	EM	150	167	185	1	1	243	2.5
SMBJ160A	SMBJ160CA	PP	EP	160	178	197	1	1	259	2.3
SMBJ170A	SMBJ170CA	PR	ER	170	189	209	1	1	275	2.2
SMBJ180A	SMBJ180CA	PT	ET	180	201	222	1	1	292	2.1

Type		Marking		V_{RMW}	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Clamp Voltage	Max. Peak Pulse Current
					$V_{BR} @ I_T$		I_T	$IR @ VR$	$V_C @ I_{PP}$	I_{PP}
					Min	Max				
UNI	BI	UNI	BI	V	V	V	mA	μA	V	A
SMBJ188A	SMBJ188CA	PB	EB	188	209	231	1	1	304	2
SMBJ200A	SMBJ200CA	PV	EV	200	224	247	1	1	324	1.9
SMBJ220A	SMBJ220CA	PX	EX	220	246	272	1	1	356	1.7
SMBJ250A	SMBJ250CA	PZ	EZ	250	279	309	1	1	405	1.5
SMBJ300A	SMBJ300CA	QE	FE	300	335	371	1	1	486	1.3
SMBJ350A	SMBJ350CA	QG	FG	350	391	432	1	1	567	1.1
SMBJ400A	SMBJ400CA	QK	FK	400	447	494	1	1	648	0.9
SMBJ440A	SMBJ440CA	QM	FM	440	492	543	1	1	713	0.9

Fig.1 Peak Pulse Power Rating Curve

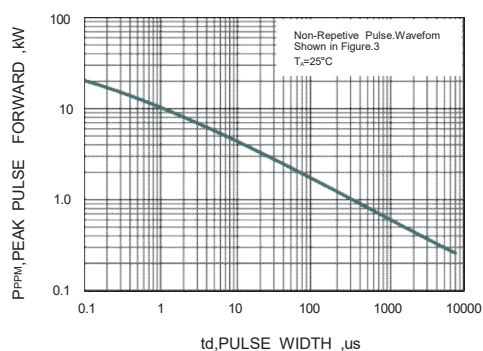


Fig.2 Forward Current Derating Curve

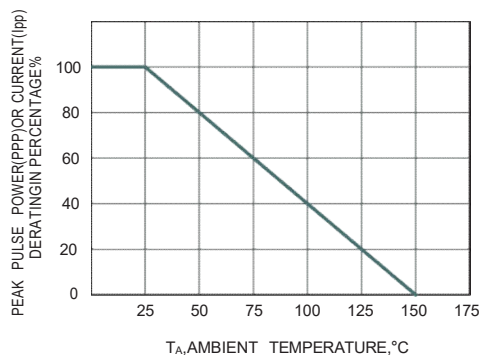


Fig.3 Pulse Waveform

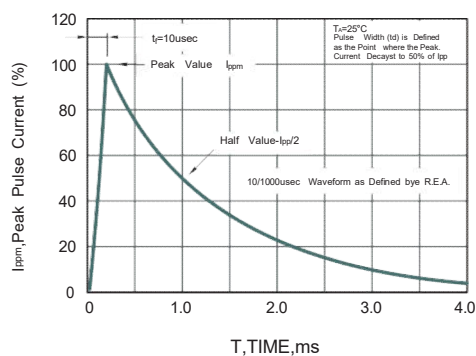
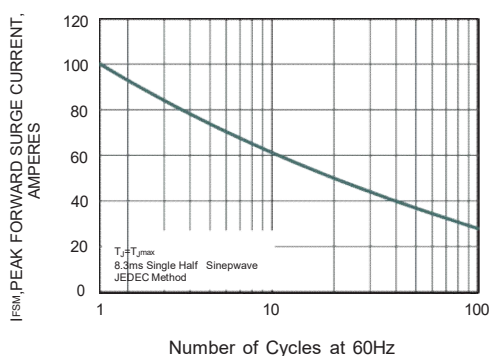
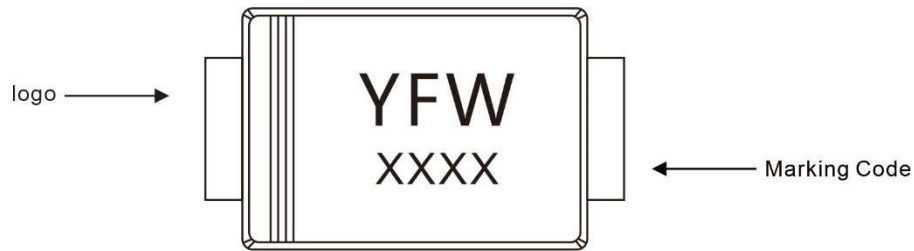


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

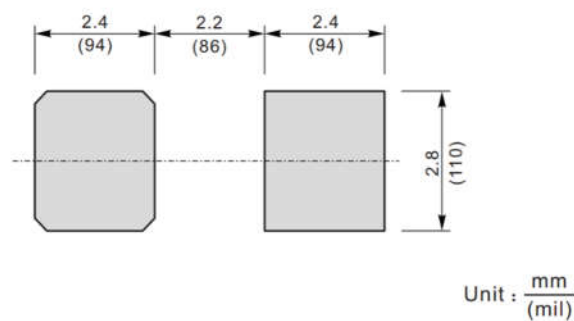
Package	Packing Description	Packing Quantity
DO-214AA SMB	Tape/Reel, 13"reel	3000PCS/Reel 30000PCS/Carton

Package Dimensions

DO-214AA SMB

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	2.13	2.44	84	96
E	4.06	4.70	160	185
D	3.3	3.94	130	155
E ₁	5.08	5.59	200	220
A ₁	0.05	0.20	2.0	7.9
L	0.8	1.5	32	59
C	0.152	0.305	6	12
b	1.9	2.2	75	87

The recommended mounting pad size



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