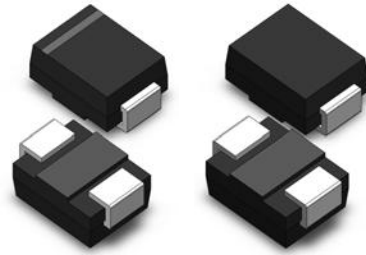


1.Description

AEB series, 600W transient voltage suppressor (TVS) in DO-214AA package, designed to protect electronic circuit which induced by lightning surge or other transient voltage situation.



2.Features

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Meets MSL level 1, per J-STD-020
- 600W peak pulse power capability at 10/1000 μ s waveform, repetition rate (duty cycle): 0.01%
- Fast response time
- Typical IR less than 1 μ A above 10V
- Plastic package has underwriters laboratory flammability 94V-0
- High Temperature soldering: 260 $^{\circ}$ C/10 seconds at terminals

3.Mechanical Data

- Case: JEDEC DO-214AA. Molded plastic over glass passivated junction
- Terminal: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode except bi-directional models
- Standard Packaging: 12mm tape
- Weight: 0.10g

4.Maximum Ratings and Characteristics

Ratings at 25 $^{\circ}$ C ambient temperature unless otherwise specified

Rating	Symbol	Value	Units
Peak pulse power dissipation at 10/1000us waveform	P _{PPM}	Minimum 600	W
Peak pulse current of at 10/1000us waveform	I _{PPM}	See Table	A
Steady state power dissipation at TA=50 $^{\circ}$ C	P _{M(AV)}	5.0	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100	A
Operating junction and Storage Temperature Range	T _J , T _{STG}	-65 to 150	$^{\circ}$ C
Typical thermal resistance junction to lead	R _{θJL}	20	$^{\circ}$ C/W
Typical thermal resistance junction to ambient	R _{θJA}	100	$^{\circ}$ C/W

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig.2.
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.
3. Mounted on 5.0mm×5.0mm copper pads to each terminal.

5.Electrical Characteristics (TA=25°C)

Part Number	Part Number	Marking		Reverse Stand off Voltage V _R (Volts)	Breakdown Voltage V _{BR} (Volts) @ I _T		Test Current I _T (mA)	Maximum Clamping Voltage V _C @ I _{PP} (V)	Maximum Peak Pulse Current I _{PP} (A)	Maximum Reverse Leakage I _R @ V _R (μA)	ROHS2.0
		UNI	BI		MIN	MAX					
AEB5.0AA0	AEB5.0CAA0	KE	AE	5	6.4	7	10	9.2	65.3	400	y
AEB6.0AA0	AEB6.0CAA0	KG	AG	6	6.67	7.37	10	10.3	58.3	400	y
AEB6.5AA0	AEB6.5CAA0	KK	AK	6.5	7.22	7.98	10	11.2	53.6	250	y
AEB7.0AA0	AEB7.0CAA0	KM	AM	7	7.78	8.6	10	12	50	100	y
AEB7.5AA0	AEB7.5CAA0	KP	AP	7.5	8.33	9.21	1	12.9	46.6	80	y
AEB8.0AA0	AEB8.0CAA0	KR	AR	8	8.89	9.83	1	13.6	44.2	50	y
AEB8.5AA0	AEB8.5CAA0	KT	AT	8.5	9.44	10.4	1	14.4	41.7	20	y
AEB9.0AA0	AEB9.0CAA0	KV	AV	9	10	11.1	1	15.4	39	10	y
AEB10AA0	AEB10CAA0	KX	AX	10	11.1	12.3	1	17	35.3	5	y
AEB11AA0	AEB11CAA0	KZ	AZ	11	12.2	13.5	1	18.2	33	1	y
AEB12AA0	AEB12CAA0	LE	BE	12	13.3	14.7	1	19.9	30.2	1	y
AEB13AA0	AEB13CAA0	LG	BG	13	14.4	15.9	1	21.5	28	1	y
AEB14AA0	AEB14CAA0	LK	BK	14	15.6	17.2	1	23.2	25.9	1	y
AEB15AA0	AEB15CAA0	LM	BM	15	16.7	18.5	1	24.4	24.6	1	y
AEB16AA0	AEB16CAA0	LP	BP	16	17.8	19.7	1	26	23.1	1	y
AEB17AA0	AEB17CAA0	LR	BR	17	18.9	20.9	1	27.6	21.8	1	y
AEB18AA0	AEB18CAA0	LT	BT	18	20	22.1	1	29.2	20.6	1	y
AEB20AA0	AEB20CAA0	LV	BV	20	22.2	24.5	1	32.4	18.6	1	y
AEB22AA0	AEB22CAA0	LX	BX	22	24.4	26.9	1	35.5	16.9	1	y
AEB24AA0	AEB24CAA0	LZ	BZ	24	26.7	29.5	1	38.9	15.5	1	y
AEB26AA0	AEB26CAA0	ME	CE	26	28.9	31.9	1	42.1	14.3	1	y
AEB28AA0	AEB28CAA0	MG	CG	28	31.1	34.4	1	45.4	13.3	1	y
AEB30AA0	AEB30CAA0	MK	CK	30	33.3	36.8	1	48.4	12.4	1	y
AEB33AA0	AEB33CAA0	MM	CM	33	36.7	40.6	1	53.3	11.3	1	y
AEB36AA0	AEB36CAA0	MP	CP	36	40	44.2	1	58.1	10.4	1	y
AEB40AA0	AEB40CAA0	MR	CR	40	44.4	49.1	1	64.5	9.3	1	y
AEB43AA0	AEB43CAA0	MT	CT	43	47.8	52.8	1	69.4	8.7	1	y

Part Number	Part Number	Marking		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage $V_C @ I_{PP}$ (V)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage $I_R @ V_R$ (μA)	ROHS2.0
UNI	BI	UNI	BI	(Volts)	MIN	MAX	(mA)	(V)			
AEB45AA0	AEB45CAA0	MV	CV	45	50	55.3	1	72.7	8.3	1	y
AEB48AA0	AEB48CAA0	MX	CX	48	53.3	58.9	1	77.4	7.8	1	y
AEB51AA0	AEB51CAA0	MZ	CZ	51	56.7	62.7	1	82.4	7.3	1	y
AEB54AA0	AEB54CAA0	NE	DE	54	60	66.3	1	87.1	6.9	1	y
AEB58AA0	AEB58CAA0	NG	DG	58	64.4	71.2	1	93.6	6.5	1	y
AEB60AA0	AEB60CAA0	NK	DK	60	66.7	73.7	1	96.8	6.2	1	y
AEB64AA0	AEB64CAA0	NM	DM	64	71.1	78.6	1	103	5.9	1	y
AEB70AA0	AEB70CAA0	NP	DP	70	77.8	86	1	113	5.3	1	y
AEB75AA0	AEB75CAA0	NR	DR	75	83.3	92.1	1	121	5	1	y
AEB78AA0	AEB78CAA0	NT	DT	78	86.7	95.8	1	126	4.8	1	y
AEB85AA0	AEB85CAA0	NV	DV	85	94.4	104	1	137	4.4	1	y
AEB90AA0	AEB90CAA0	NX	DX	90	100	111	1	146	4.1	1	y
AEB100AA0	AEB100CAA0	NZ	DZ	100	111	123	1	162	3.7	1	y
AEB110AA0	AEB110CAA0	PE	EE	110	122	135	1	177	3.4	1	y
AEB120AA0	AEB120CAA0	PG	EG	120	133	147	1	193	3.1	1	y
AEB130AA0	AEB130CAA0	PK	EK	130	144	159	1	209	2.9	1	y
AEB150AA0	AEB150CAA0	PM	EM	150	167	185	1	243	2.5	1	y
AEB160AA0	AEB160CAA0	PP	EP	160	178	197	1	259	2.3	1	y
AEB170AA0	AEB170CAA0	PR	ER	170	189	209	1	275	2.2	1	y
AEB180AA0	AEB180CAA0	PT	ET	180	201	222	1	292	2.1	1	y
AEB200AA0	AEB200CAA0	PV	EV	200	224	247	1	324	1.9	1	y
AEB220AA0	AEB220CAA0	PX	EX	220	246	272	1	356	1.7	1	y
AEB250AA0	AEB250CAA0	PZ	EZ	250	279	309	1	405	1.5	1	y
AEB300AA0	AEB300CAA0	QE	FE	300	335	371	1	486	1.3	1	y
AEB350AA0	AEB350CAA0	QG	FG	350	391	432	1	567	1.1	1	y
AEB400AA0	AEB400CAA0	QK	FK	400	447	494	1	648	0.9	1	y
AEB440AA0	AEB440CAA0	QM	FM	440	492	543	1	713	0.9	1	y

For bidirectional type having V_R of 10 volts and less, the I_R limit is double.

6. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Figure 1. Peak Pulse Power Rating Curve

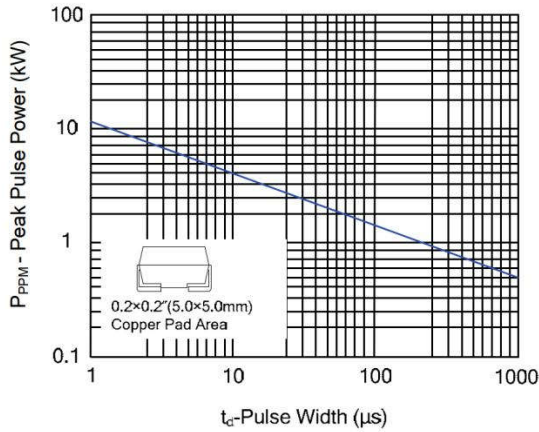


Figure 2 Pulse Derating Curve

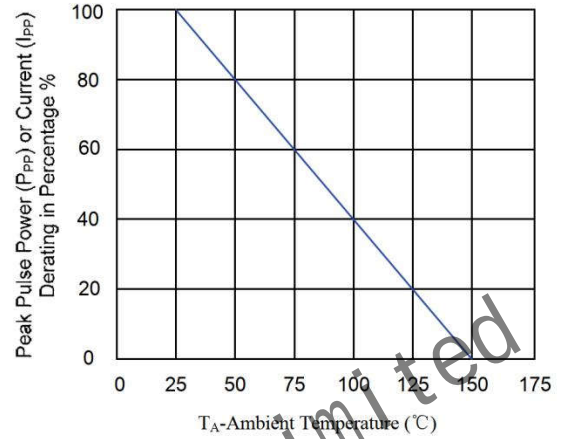


Figure 3 Pulse Waveform

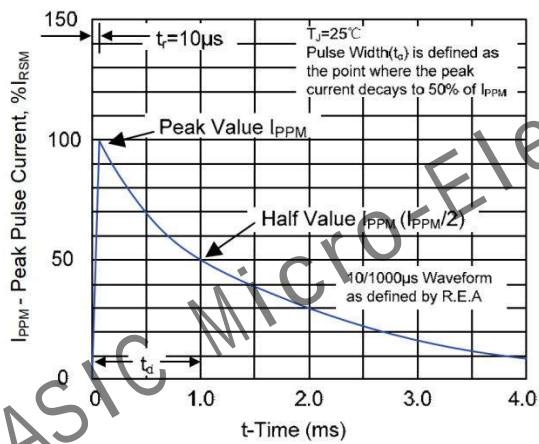


Figure 4 Typical Junction Capacitance

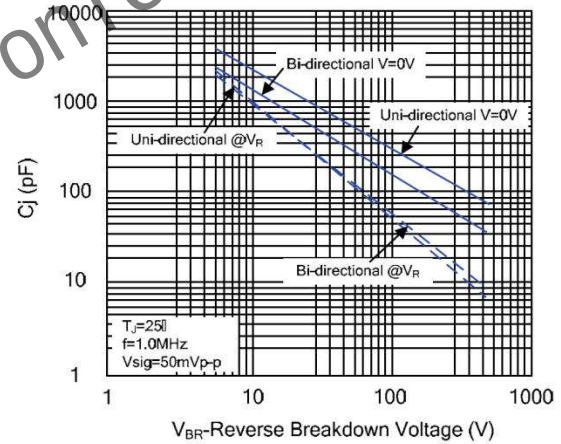


Figure 5 Steady State Power Dissipation Derating Curve

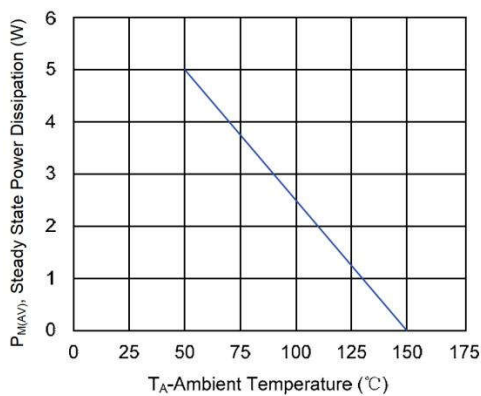
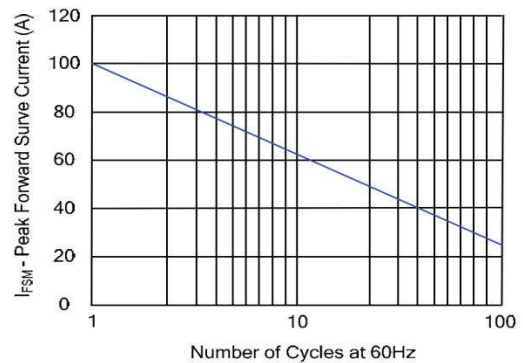
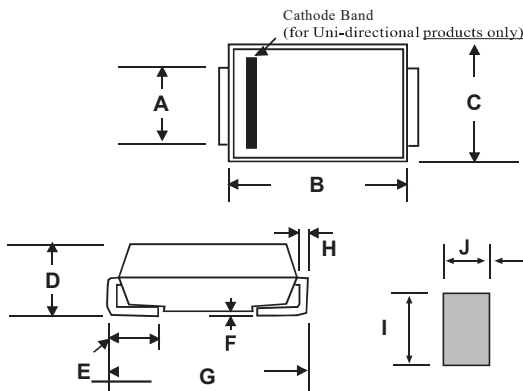


Figure 6 Maximum Non-Repetitive Forward Surge Current
Uni-Directional Only

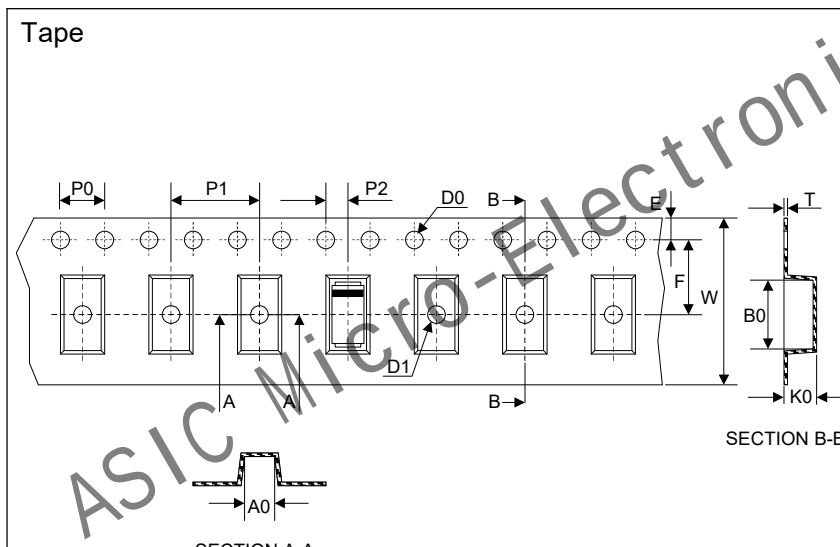
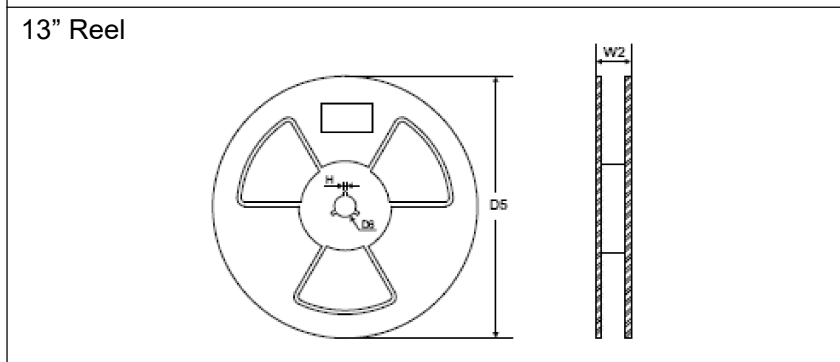


7.Dimension (SMB/DO-214AA)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.073	0.086	1.85	2.2
B	0.16	0.183	4.06	4.65
C	0.13	0.155	3.3	3.94
D	0.079	0.098	2.0	2.5
E	0.03	0.06	0.76	1.52
F	-	0.012	-	0.3
G	0.198	0.22	5.04	5.59
H	0.006	0.012	0.152	0.305
I	0.089	-	2.26	-
J	0.085	-	2.16	-
K	-	0.107	-	2.74
L	0.085	-	2.16	-

8. Packaging

Tape		Symbol	Dimension (mm)
		W	12.00±0.20
		P0	4.00±0.10
		P1	8.00±0.10
		P2	2.00±0.10
		D0	Φ1.55±0.10
		D1	Φ1.5±0.10
		E	1.75±0.10
		F	5.50±0.05
		A0	3.86±0.10
		B0	5.65±0.10
		K0	2.75±0.15
		T	0.25±0.05
		D5	Φ330.0±2.0
		D6	Φ13.5±0.5
		H	2.5±1.0
		W2	16.0±3.0
		Quantity: 3000PCS	

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