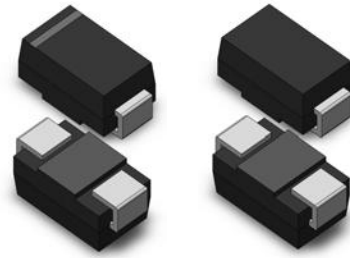


1.Description

AEAxXXA0 series, 400W transient voltage suppressor (TVS) in DO-214AC 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
- 400W 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-214AC. 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: 0.07g

4.Maximum Ratings and Characteristics

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

Rating	Symbol	Value	Units
Peak pulse power dissipation at 10/1000 μ s waveform	P _{PPM}	Minimum 400	W
Peak pulse current of at 10/1000 μ s waveform	I _{PPM}	See Table	A
Steady state power dissipation at TA=50 $^{\circ}$ C	P _{M(AV)}	3.3	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	40	A
Operating junction and Storage Temperature Range	T _J , T _{STG}	-65 to 150	$^{\circ}$ C
Typical thermal resistance junction to lead	R _{θJL}	30	$^{\circ}$ C/W
Typical thermal resistance junction to ambient	R _{θJA}	120	$^{\circ}$ 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					
AEA5.0AA0	AEA5.0CAA0	AE	WE	5	6.4	7	10	9.2	43.5	400	y
AEA6.0AA0	AEA6.0CAA0	AG	WG	6	6.67	7.37	10	10.3	38.8	400	y
AEA6.5AA0	AEA6.5CAA0	AK	WK	6.5	7.22	7.98	10	11.2	35.7	250	y
AEA7.0AA0	AEA7.0CAA0	AM	WM	7	7.78	8.6	10	12	33.3	100	y
AEA7.5AA0	AEA7.5CAA0	AP	WP	7.5	8.33	9.21	1	12.9	31	80	y
AEA8.0AA0	AEA8.0CAA0	AR	WR	8	8.89	9.83	1	13.6	29.4	50	y
AEA8.5AA0	AEA8.5CAA0	AT	WT	8.5	9.44	10.4	1	14.4	27.8	20	y
AEA9.0AA0	AEA9.0CAA0	AV	WV	9	10	11.1	1	15.4	26	10	y
AEA10AA0	AEA10CAA0	AX	WX	10	11.1	12.3	1	17	23.5	5	y
AEA11AA0	AEA11CAA0	AZ	WZ	11	12.2	13.5	1	18.2	22	1	y
AEA12AA0	AEA12CAA0	BE	XE	12	13.3	14.7	1	19.9	20.1	1	y
AEA13AA0	AEA13CAA0	BG	XG	13	14.4	15.9	1	21.5	18.6	1	y
AEA14AA0	AEA14CAA0	BK	XK	14	15.6	17.2	1	23.2	17.2	1	y
AEA15AA0	AEA15CAA0	BM	XM	15	16.7	18.5	1	24.4	16.4	1	y
AEA16AA0	AEA16CAA0	BP	XP	16	17.8	19.7	1	26	15.4	1	y
AEA17AA0	AEA17CAA0	BR	XR	17	18.9	20.9	1	27.6	14.5	1	y
AEA18AA0	AEA18CAA0	BT	XT	18	20	22.1	1	29.2	13.7	1	y
AEA20AA0	AEA20CAA0	BV	XV	20	22.2	24.5	1	32.4	12.3	1	y
AEA22AA0	AEA22CAA0	BX	XX	22	24.4	26.9	1	35.5	11.3	1	y
AEA24AA0	AEA24CAA0	BZ	XZ	24	26.7	29.5	1	38.9	10.3	1	y
AEA26AA0	AEA26CAA0	CE	YE	26	28.9	31.9	1	42.1	9.5	1	y
AEA28AA0	AEA28CAA0	CG	YG	28	31.1	34.4	1	45.4	8.8	1	y
AEA30AA0	AEA30CAA0	CK	YK	30	33.3	36.8	1	48.4	8.3	1	y
AEA33AA0	AEA33CAA0	CM	YM	33	36.7	40.6	1	53.3	7.5	1	y
AEA36AA0	AEA36CAA0	CP	YP	36	40	44.2	1	58.1	6.9	1	y
AEA40AA0	AEA40CAA0	CR	YR	40	44.4	49.1	1	64.5	6.2	1	y
AEA43AA0	AEA43CAA0	CT	YT	43	47.8	52.8	1	69.4	5.8	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)			
AEA45AA0	AEA45CAA0	CV	YV	45	50	55.3	1	72.7	5.5	1	y
AEA48AA0	AEA48CAA0	CX	YX	48	53.3	58.9	1	77.4	5.2	1	y
AEA51AA0	AEA51CAA0	CZ	YZ	51	56.7	62.7	1	82.4	4.9	1	y
AEA54AA0	AEA54CAA0	RE	ZE	54	60	66.3	1	87.1	4.6	1	y
AEA58AA0	AEA58CAA0	RG	ZG	58	64.4	71.2	1	93.6	4.3	1	y
AEA60AA0	AEA60CAA0	RK	ZK	60	66.7	73.7	1	96.8	4.1	1	y
AEA64AA0	AEA64CAA0	RM	ZM	64	71.1	78.6	1	103	3.9	1	y
AEA70AA0	AEA70CAA0	RP	ZP	70	77.8	86	1	113	3.5	1	y
AEA75AA0	AEA75CAA0	RR	ZR	75	83.3	92.1	1	121	3.3	1	y
AEA78AA0	AEA78CAA0	RT	ZT	78	86.7	95.8	1	126	3.2	1	y
AEA85AA0	AEA85CAA0	RV	ZV	85	94.4	104	1	137	2.9	1	y
AEA90AA0	AEA90CAA0	RX	ZX	90	100	111	1	146	2.7	1	y
AEA100AA0	AEA100CAA0	RZ	ZZ	100	111	123	1	162	2.5	1	y
AEA110AA0	AEA110CAA0	SE	VE	110	122	135	1	177	2.3	1	y
AEA120AA0	AEA120CAA0	SG	VG	120	133	147	1	193	2.1	1	y
AEA130AA0	AEA130CAA0	SK	VK	130	144	159	1	209	1.9	1	y
AEA150AA0	AEA150CAA0	SM	VM	150	167	185	1	243	1.6	1	y
AEA160AA0	AEA160CAA0	SP	VP	160	178	197	1	259	1.5	1	y
AEA170AA0	AEA170CAA0	SR	VR	170	189	209	1	275	1.5	1	y
AEA180AA0	AEA180CAA0	ST	VT	180	201	222	1	292	1.4	1	y
AEA200AA0	AEA200CAA0	SV	VV	200	224	247	1	324	1.2	1	y
AEA220AA0	AEA220CAA0	SX	VX	220	246	272	1	356	1.1	1	y
AEA250AA0	AEA250CAA0	SZ	VZ	250	279	309	1	405	1	1	y
AEA300AA0	AEA300CAA0	TE	UE	300	335	371	1	486	0.8	1	y
AEA350AA0	AEA350CAA0	TG	UG	350	391	432	1	567	0.7	1	y
AEA400AA0	AEA400CAA0	TK	UK	400	447	494	1	648	0.6	1	y
AEA440AA0	AEA440CAA0	TM	UM	440	492	543	1	713	0.6	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

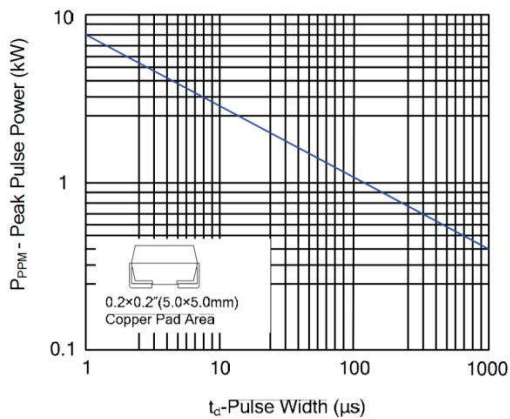


Figure 2 Pulse Derating Curve

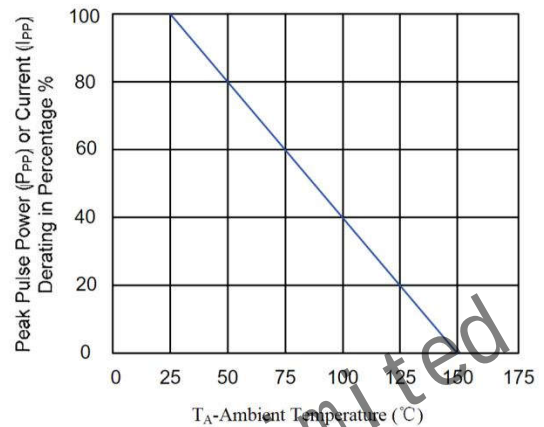


Figure 3 Pulse Waveform

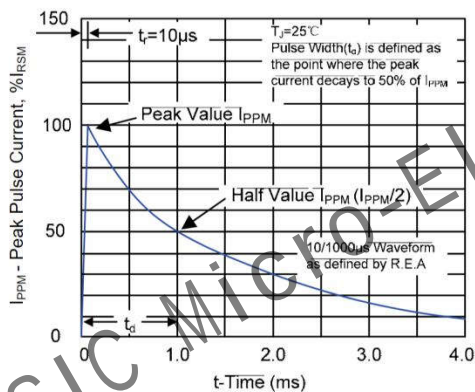


Figure 4 Typical Junction Capacitance

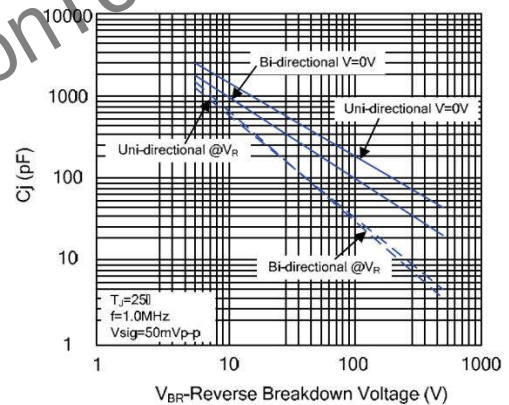


Figure 5 Steady State Power Dissipation Derating Curve

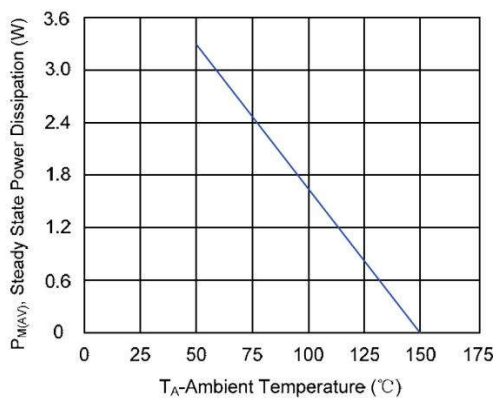
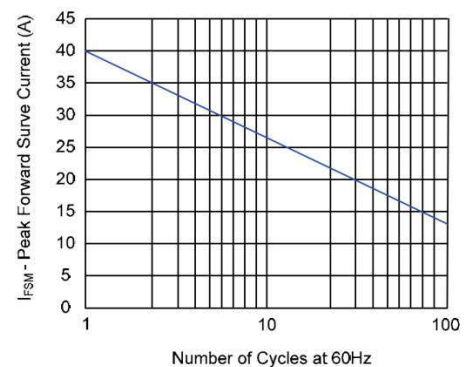
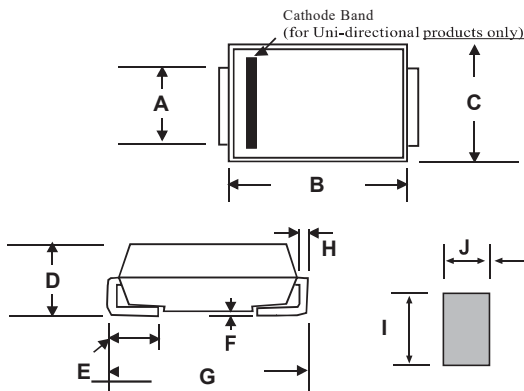


Figure 6 Maximum Non-Repetitive Forward Surge Current
Uni-Directional Only



7.Dimension (SMA/DO-214AC)



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.049	0.065	1.25	1.65
B	0.157	0.177	3.99	4.5
C	0.1	0.11	2.54	2.79
D	0.078	0.09	1.98	2.29
E	0.03	0.06	0.78	1.52
F	-	0.008	-	0.203
G	0.194	0.208	4.93	5.28
H	0.006	0.012	0.152	0.305
I	0.07	-	1.8	-
J	0.082	-	2.1	-
K	-	0.09	-	2.3
L	0.082	-	2.1	-

8. Packaging

Tape		Symbol	Dimension (mm)
		W	12.00±0.20
		P0	4.00±0.10
		P1	4.00±0.10
		P2	2.00±0.10
		D0	Φ1.5±0.10
		D1	Φ1.5±0.10
		E	1.75±0.10
		F	5.50±0.05
		A0	2.79±0.10
		B0	5.33±0.10
		K0	2.55±0.15
		T	0.25±0.05
13" Reel		D5	Φ330.0±2.0
		D6	Φ13.5±0.5
		H	2.5±1.0
		W2	16.0±2.0
		Quantity: 5000PCS	

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