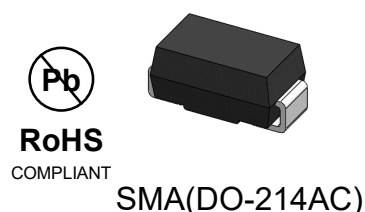


400W, 5 - 90V Transient Voltage Suppressors

Features

- Very fast response time
- Glass passivated junction
- Moisture sensitivity: level 1, per J-STD-020
- Available in unidirectional and bidirectional
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21 definition
- 400 W peak pulse power capability with a 10/1000 μ s waveform
- AEC-Q101 qualified



Applications

- SMPS
- Adapters
- Monitor

Absolute Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Peak power dissipation with a 10/1000 μ s waveform	P _{PPM}	400	W
Peak pulse current with a 10/1000 μ s waveform	I _{PPM}	See Next Table	A
Power dissipation, on infinite heat sink at T _L =75°C	P _D	3	W
Peak forward surge current, 8.3ms single half-sine wave	I _{FSM}	40	A
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Thermal-Mechanical Specifications (TA=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{thJA}	90	°C /W
Thermal Resistance, Junction to Case	R _{thJC}	20	°C /W
Thermal Resistance, Junction to Lead	R _{thJL}	25	°C /W

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (V)		Test Current I _T (mA)	Stand off Voltage V _{WM} (V)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{ppM} V _c (V)
		UNI	BI							
				Min	Max					
ASMAJ5.0AS	ASMAJ5.0CAS	AAES	AWES	6.40	7.07	10.0	5.0	800	43.5	9.2
ASMAJ6.0AS	ASMAJ6.0CAS	AAGS	AWGS	6.67	7.37	10.0	6.0	800	38.8	10.3
ASMAJ6.5AS	ASMAJ6.5CAS	AAKS	AWKS	7.22	7.98	10.0	6.5	500	35.7	11.2
ASMAJ7.0AS	ASMAJ7.0CAS	AAMS	AWMS	7.78	8.60	10.0	7.0	200	33.3	12.0
ASMAJ7.5AS	ASMAJ7.5CAS	AAPS	AWPS	8.33	9.21	1.0	7.5	100	31.0	12.9
ASMAJ8.0AS	ASMAJ8.0CAS	AARS	AWRS	8.89	9.83	1.0	8.0	50	29.4	13.6
ASMAJ8.5AS	ASMAJ8.5CAS	AATS	AWTS	9.44	10.4	1.0	8.5	10	27.8	14.4
ASMAJ9.0AS	ASMAJ9.0CAS	AAVS	AWVS	10.0	11.1	1.0	9.0	5.0	26.0	15.4
ASMAJ10AS	ASMAJ10CAS	AAXS	AWXS	11.1	12.3	1.0	10	1.0	23.5	17.0
ASMAJ11AS	ASMAJ11CAS	AAZS	AWZS	12.2	13.5	1.0	11	1.0	22.0	18.2
ASMAJ12AS	ASMAJ12CAS	ABES	AXES	13.3	14.7	1.0	12	1.0	20.1	19.9
ASMAJ13AS	ASMAJ13CAS	ABGS	AXGS	14.4	15.9	1.0	13	1.0	18.6	21.5
ASMAJ14AS	ASMAJ14CAS	ABKS	AXKS	15.6	17.2	1.0	14	1.0	17.2	23.2
ASMAJ15AS	ASMAJ15CAS	ABMS	AXMS	16.7	18.5	1.0	15	1.0	16.4	24.4
ASMAJ16AS	ASMAJ16CAS	ABPS	AXPS	17.8	19.7	1.0	16	1.0	15.4	26.0
ASMAJ17AS	ASMAJ17CAS	ABRS	AXRS	18.9	20.9	1.0	17	1.0	14.5	27.6
ASMAJ18AS	ASMAJ18CAS	ABTS	AXTS	20.0	22.1	1.0	18	1.0	13.7	29.2
ASMAJ20AS	ASMAJ20CAS	ABVS	AXVS	22.2	24.5	1.0	20	1.0	12.3	32.4
ASMAJ22AS	ASMAJ22CAS	ABXS	AXXS	24.4	26.9	1.0	22	1.0	11.3	35.5
ASMAJ24AS	ASMAJ24CAS	ABZS	AXZS	26.7	29.5	1.0	24	1.0	10.3	38.9
ASMAJ26AS	ASMAJ26CAS	ACES	AYES	28.9	31.9	1.0	26	1.0	9.5	42.1
ASMAJ28AS	ASMAJ28CAS	ACGS	AYGS	31.1	34.4	1.0	28	1.0	8.8	45.4
ASMAJ30AS	ASMAJ30CAS	ACKS	AYKS	33.3	36.8	1.0	30	1.0	8.3	48.4
ASMAJ33AS	ASMAJ33CAS	ACMS	AYMS	36.7	40.6	1.0	33	1.0	7.5	53.3
ASMAJ36AS	ASMAJ36CAS	ACPS	AYPS	40.0	44.4	1.0	36	1.0	6.9	58.1
ASMAJ40AS	ASMAJ40CAS	ACRS	AYRS	44.4	49.1	1.0	40	1.0	6.2	64.5
ASMAJ43AS	ASMAJ43CAS	ACTS	AYTS	47.8	52.8	1.0	43	1.0	5.8	69.4
ASMAJ45AS	ASMAJ45CAS	ACVS	AYVS	50.0	55.3	1.0	45	1.0	5.5	72.7
ASMAJ48AS	ASMAJ48CAS	ACXS	AYXS	53.3	58.9	1.0	48	1.0	5.2	77.4
ASMAJ51AS	ASMAJ51CAS	ACZS	AYZS	56.7	62.7	1.0	51	1.0	4.9	82.4
ASMAJ54AS	ASMAJ54CAS	ARES	AZES	60.0	66.3	1.0	54	1.0	4.6	87.1
ASMAJ58AS	ASMAJ58CAS	ARGS	AZGS	64.4	71.2	1.0	58	1.0	4.3	93.6
ASMAJ60AS	ASMAJ60CAS	ARKS	AZKS	66.7	73.7	1.0	60	1.0	4.1	96.8
ASMAJ64AS	ASMAJ64CAS	ARMS	AZMS	71.1	78.6	1.0	64	1.0	3.9	103

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Breakdown Voltage VBR (V)		Test Current I _T (mA)	Stand off Voltage V _{WM} (V)	Maximum reverse leakage at V _{WM} I _D (μA)	Maximum Peak Pulse Current I _{ppM} (A)	Maximum Clamping Voltage at I _{ppM} V _C (V)
		UNI	BI							
				Min	Max					
ASMAJ70AS	ASMAJ70CAS	ARPS	AZPS	77.8	86.0	1.0	70	1.0	3.5	113
ASMAJ75AS	ASMAJ75CAS	ARRS	AZRS	83.3	92.1	1.0	75	1.0	3.3	121
ASMAJ78AS	ASMAJ78CAS	ARTS	AZTS	86.7	95.8	1.0	78	1.0	3.2	126
ASMAJ85AS	ASMAJ85CAS	ARVS	AZVS	94.4	104	1.0	85	1.0	2.9	137
ASMAJ90AS	ASMAJ90CAS	ARXS	AZXS	100	111	1.0	90	1.0	2.7	146

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

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

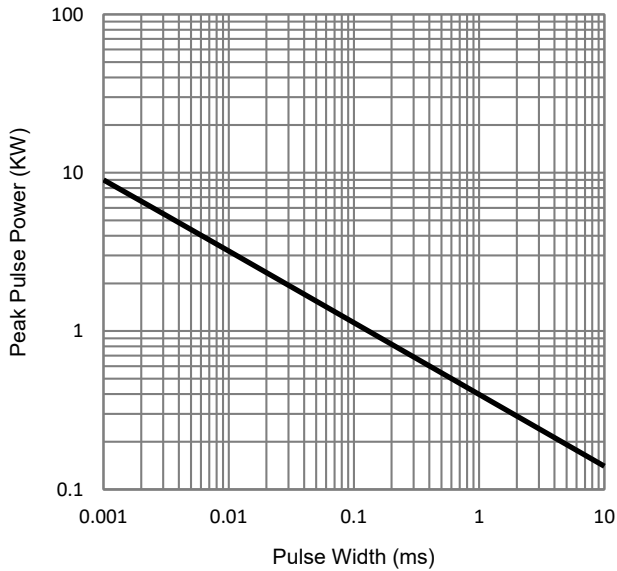


Fig.1 –Peak Pulse Power Derating Curve

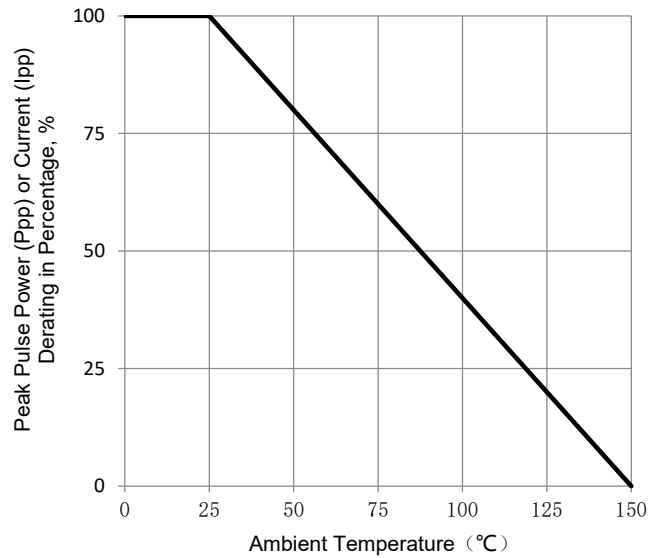


Fig.2 – Pulse Power vs Ambient Temperature

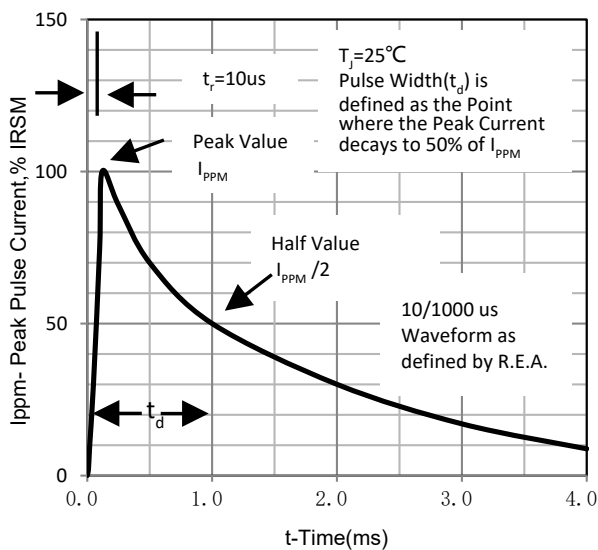


Fig.3 – Pulse Waveform

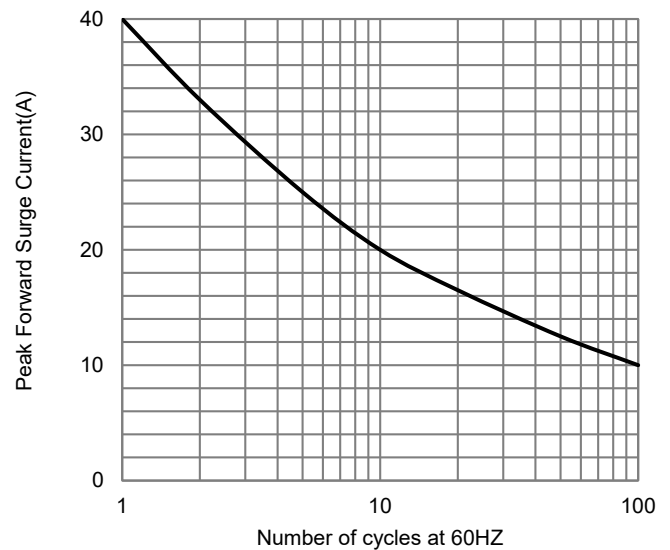
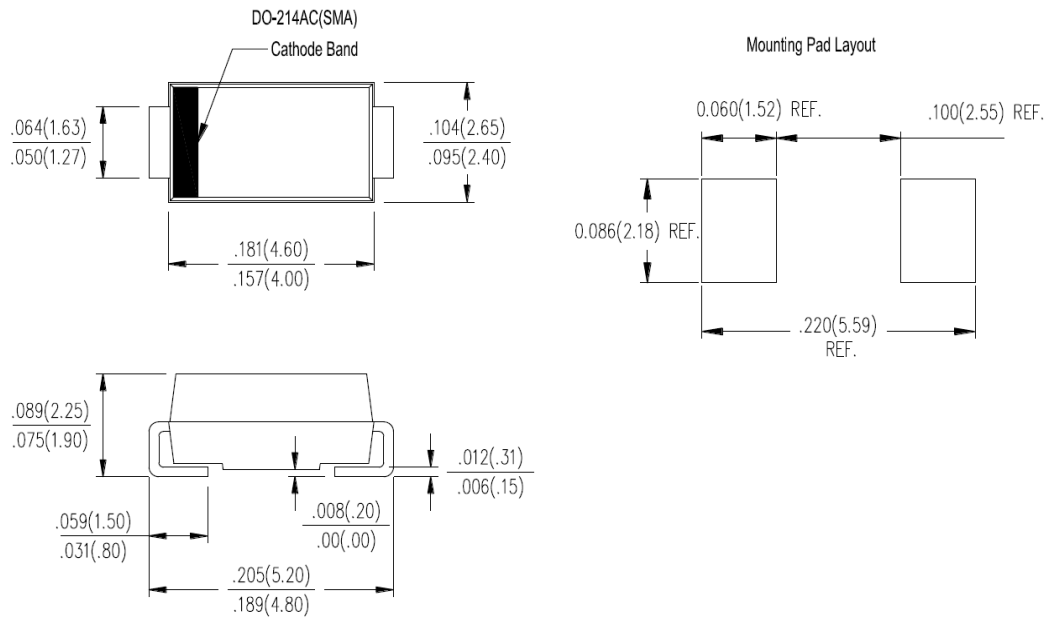


Fig.4 – Maximum Non-Repetitive Surge Current

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



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