LITE-ON SEMICONDUCTOR

ASMAJ SERIES

SURFACE MOUNT
UNIDIRECTIONAL AND BIDIRECTIONAL
TRANSIENT VOLTAGE SUPPRESSORS

STAND-OFF VOLTAGE - **5.0** to **100** Volts
POWER DISSIPATION - **400** WATTS

FEATURES

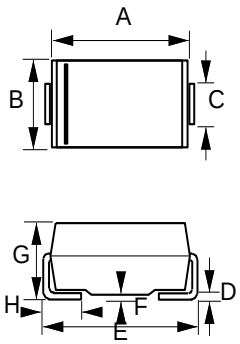
AUTOMOTIVE

- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- IR less than 0.5uA above 10V
- Fast response time: typically less than 1.0ns for Uni-direction, less than 5.0ns for Bi-direction, form 0 Volts to BV min
- RoHS compliant
- AEC-Q101 qualified
- PPAP capable
- Automotive grade

MECHANICAL DATA

- Case : Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Polarity : by cathode band denotes uni-directional device none cathode band denotes bi-directional device
- Weight : 0.002 ounces, 0.064 gram

SMA



SMA		
DIM	**MIN**	**MAX**
A	**4.06**	**4.57**
B	**2.29**	**2.92**
C	**1.27**	**1.63**
D	**0.15**	**0.31**
E	**4.83**	**5.59**
F	**0.05**	**0.20**
G	**1.96**	**2.40**
H	**0.76**	**1.52**
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
PEAK POWER DISSIPATION AT T_A = 25 ℃, T_P = 1ms (Note 1)	P_{PK}	400	W
Peak Forward Surge Current 8.3ms single half sine-wave @ TJ = 25 ℃ (Note 2)	I_{FSM}	40	A
Steady State Power Dissipation, with PCB	$P_{M(AV)}$	1.0	W
Maximum Instantaneous forward voltage at 16A (Note 2, 3)	V_F	3.0	V
Operating Temperature Range	T_J	-55 to +175	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C

NOTES : 1. Non-repetitive current pulse, per fig. 3 and derated above T_A= 25 ℃ per fig.1.
2. For unidirectional units only.
3. VF max=3.0V at IF=16 A 300us square wave pulse.(for devices of VBR<100V)

REV. 0, Aug-2017, KSIA02

FIG.1 - PULSE DERATING CURVE

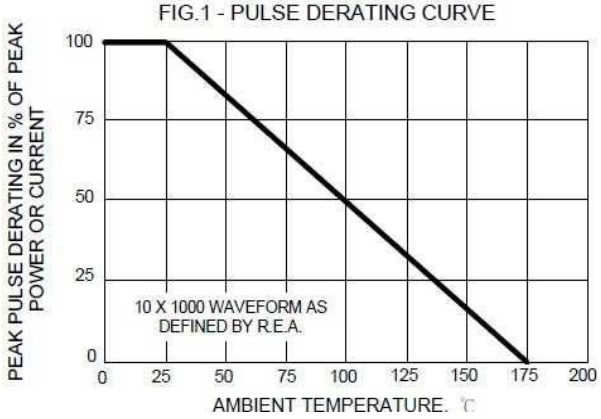


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

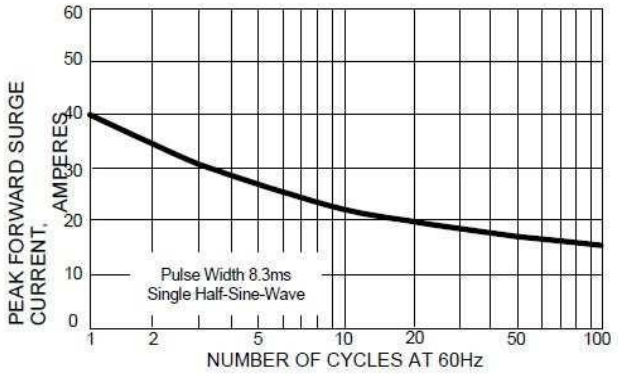


FIG.3 - PULSE WAVEFORM

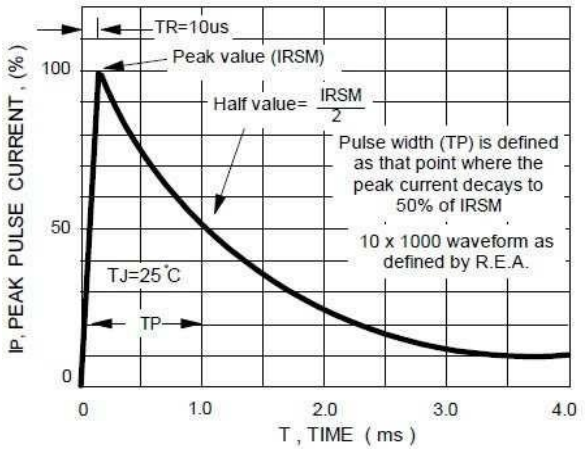


FIG.4 - TYPICAL JUNCTION CAPACITANCE

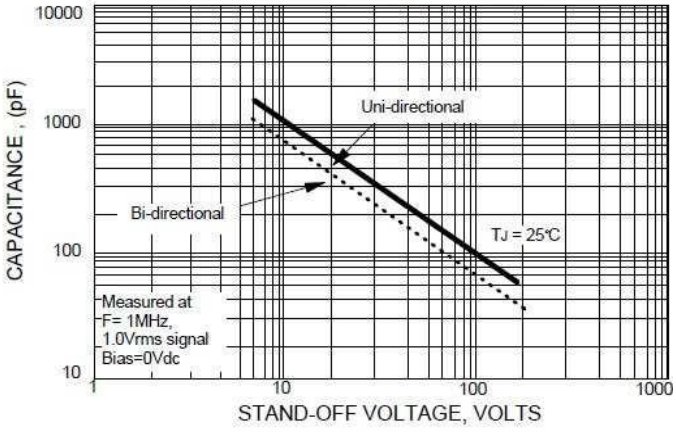


FIG.5 - PULSE RATING CURVE

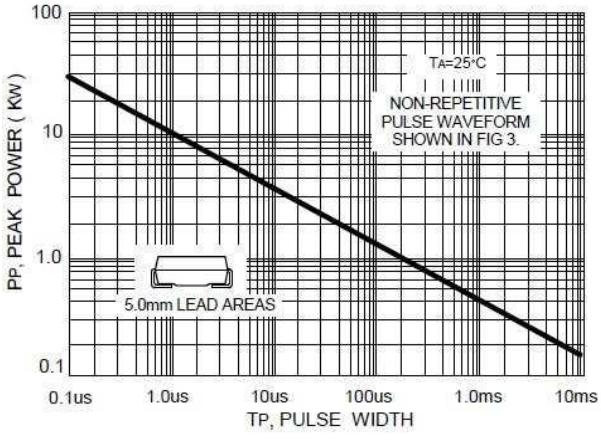
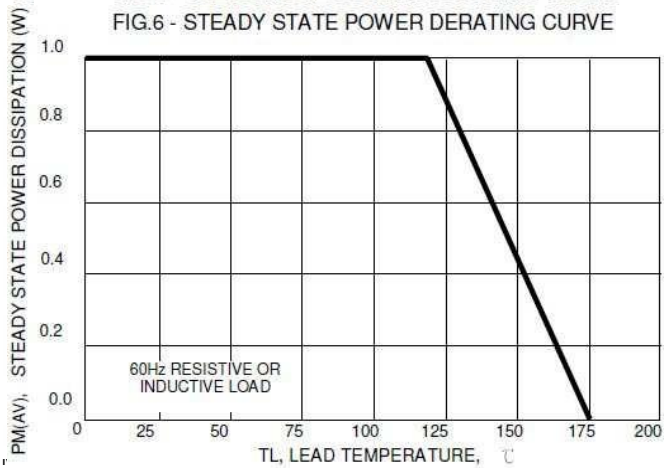


FIG.6 - STEADY STATE POWER DERATING CURVE



LITE-ON
SEMICONDUCTOR

Device Uni- Directional	Device Bi- Directional	Device Marking Code		Reverse Standoff Voltage	Breakdowm Voltage VBR Volts			Max. Clamping Voltage @Ipp	Max. Peak Pulse Current	Max. Reverse Leakae @ VR
		(UNI)	(BI)	VR (V)	Min.	Max.	@It (mA)	VC (V)	IPP (A)	IR (uA)
ASMAJ5.0A	ASMAJ5.0CA	AHE	ATE	5.0	6.40	7.07	10	9.2	43.5	800
ASMAJ6.0A	ASMAJ6.0CA	AHG	ATG	6.0	6.67	7.37	10	10.3	38.8	800
ASMAJ6.5A	ASMAJ6.5CA	AHK	ATK	6.5	7.22	7.98	10	11.2	35.7	500
ASMAJ7.0A	ASMAJ7.0CA	AHM	ATM	7.0	7.78	8.60	10	12.0	33.3	200
ASMAJ7.5A	ASMAJ7.5CA	AHP	ATP	7.5	8.33	9.21	1	12.9	31.0	100
ASMAJ8.0A	ASMAJ8.0CA	AHR	ATR	8.0	8.89	9.83	1	13.6	29.4	50
ASMAJ8.5A	ASMAJ8.5CA	AHT	ATT	8.5	9.44	10.43	1	14.4	27.7	10
ASMAJ9.0A	ASMAJ9.0CA	AHV	ATV	9.0	10.0	11.1	1	15.4	26.0	5
ASMAJ10A	ASMAJ10CA	AHX	ATX	10	11.1	12.3	1	17.0	23.5	5
ASMAJ11A	ASMAJ11CA	AHZ	ATZ	11	12.2	13.5	1	18.2	22.0	0.5
ASMAJ12A	ASMAJ12CA	AIE	AUE	12	13.3	14.7	1	19.9	20.1	0.5
ASMAJ13A	ASMAJ13CA	AIG	AUG	13	14.4	15.9	1	21.5	18.6	0.5
ASMAJ14A	ASMAJ14CA	AIK	AUK	14	15.6	17.2	1	23.2	17.2	0.5
ASMAJ15A	ASMAJ15CA	AIM	AUM	15	16.7	18.5	1	24.4	16.4	0.5
ASMAJ16A	ASMAJ16CA	AIP	AUP	16	17.8	19.7	1	26.0	15.3	0.5
ASMAJ17A	ASMAJ17CA	AIR	AUR	17	18.9	20.9	1	27.6	14.5	0.5
ASMAJ18A	ASMAJ18CA	AIT	AUT	18	20.0	22.1	1	29.2	13.7	0.5
ASMAJ20A	ASMAJ20CA	AIV	AUV	20	22.2	24.5	1	32.4	12.3	0.5
ASMAJ22A	ASMAJ22CA	AIX	AUX	22	24.4	27.0	1	35.5	11.2	0.5
ASMAJ24A	ASMAJ24CA	AIZ	AUZ	24	26.7	29.5	1	38.9	10.3	0.5
ASMAJ26A	ASMAJ26CA	AJE	AVE	26	28.9	31.9	1	42.1	9.5	0.5
ASMAJ28A	ASMAJ28CA	AJG	AVG	28	31.1	34.4	1	45.4	8.8	0.5
ASMAJ30A	ASMAJ30CA	AJK	AVK	30	33.3	36.8	1	48.4	8.3	0.5
ASMAJ33A	ASMAJ33CA	AJM	AVM	33	36.7	40.6	1	53.3	7.5	0.5
ASMAJ36A	ASMAJ36CA	AJP	AVP	36	40.0	44.2	1	58.1	6.9	0.5
ASMAJ40A	ASMAJ40CA	AJR	AVR	40	44.4	49.1	1	64.5	6.2	0.5
ASMAJ43A	ASMAJ43CA	AJT	AVT	43	47.8	52.8	1	69.4	5.7	0.5
ASMAJ45A	ASMAJ45CA	AJV	AVV	45	50.0	55.3	1	72.7	5.5	0.5
ASMAJ48A	ASMAJ48CA	AJX	AVX	48	53.3	58.9	1	77.4	5.2	0.5
ASMAJ51A	ASMAJ51CA	AJZ	AVZ	51	56.7	62.7	1	82.4	4.9	0.5
ASMAJ54A	ASMAJ54CA	ARE	AWE	54	60.0	66.3	1	87.1	4.6	0.5
ASMAJ58A	ASMAJ58CA	ARG	AWG	58	64.4	71.2	1	93.6	4.3	0.5
ASMAJ60A	ASMAJ60CA	ARK	AWK	60	66.7	73.7	1	96.8	4.1	0.5
ASMAJ64A	ASMAJ64CA	ARM	AWM	64	71.1	78.6	1	103	3.9	0.5
ASMAJ70A	ASMAJ70CA	ARP	AWP	70	77.8	86.0	1	113	3.5	0.5
ASMAJ75A	ASMAJ75CA	ARR	AWR	75	83.3	92.1	1	121	3.3	0.5
ASMAJ78A	ASMAJ78CA	ART	AWT	78	86.7	95.8	1	126	3.2	0.5
ASMAJ85A	ASMAJ85CA	ARV	AWV	85	94.4	104	1	137	2.9	0.5
ASMAJ90A	ASMAJ90CA	ARX	AWX	90	100	111	1	146	2.7	0.5
ASMAJ100A	ASMAJ100CA	ARZ	AWZ	100	111	123	1	162	2.5	0.5

NOTE :

Suffix 'A ' denotes 5% tolerance device.

1.) Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices.

2.) The IR limit is double for Bi-Directional devices.

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