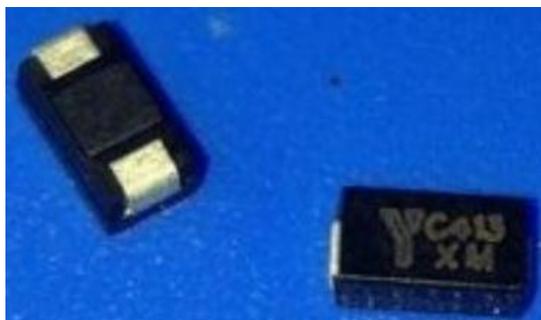


SMAJ-H Series

Features

- Glass passivated chip
- 400 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- Very fast response time
- AEC-Q101 qualified
- RoHS compliant

- Mounting position: Any



SMA(DO-214AC)

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method2026
- Polarity: Color band denotes cathode end except Bipolar

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

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 μ s waveform ⁽¹⁾	P _{PP}	400	Watts
Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	I _{pp}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P _D	1	W
Peak forward surge current, 8.3ms single half sinewave unidirectional only ⁽²⁾	I _{FSM}	40	A
Maximum instantaneous forward voltage at 25 A for unidirectional only ⁽³⁾	V _F	3.5/5.0	V
Operating junction and storage temperature range	T _J T _{STG}	-55 to +150	°C

Note:

(1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1

(2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

(3)V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V

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

Part Number (Bi)	Part Number (Uni)	MARKING		Reverse Stand off Voltage V _R (Volts)	Breakdown Voltage V _{BR} (Volts)@I _T		Test Current I _T (mA)	Maximum Reverse Leakage I _R @ V _R (μ A)	Maximum Peak Pulse Current I _{pp} (A)	Maximum Clamping Voltage V _c @ I _{pp} (V)
		BI	UNI		Min .V	Max .V				
SMAJ5.0CA-H	SMAJ5.0A-H	WEH	AEH	5.0	6.40	7.00	10	500	43.5	9.2
SMAJ6.0CA-H	SMAJ6.0A-H	WGH	AGH	6.0	6.67	7.37	10	500	38.8	10.3
SMAJ 6.5CA-H	SMAJ 6.5A-H	WKH	AKH	6.5	7.22	7.90	10	300	35.7	11.2



Trustworthy electronic circuit protection expert

Transient Voltage Suppression Diodes Surface Mount – 400W > SMAJ-H Series

SMAJ7.0CA-H	SMAJ7.0 A-H	WMH	AMH	7.0	7.78	8.60	10	200	33.3	12.0
SMAJ 7.5CA-H	SMAJ 7.5A-H	WPH	APH	7.5	8.33	9.21	1	100	31.0	12.9
SMAJ 8.0CA-H	SMAJ 8.0A-H	WRH	ARH	8.0	8.89	9.83	1	50	29.4	13.6
SMAJ8.5CA-H	SMAJ8.5 A-	WTH	ATH	8.5	9.44	10.40	1	20	27.8	14.4
SMAJ9.0CA-H	SMAJ9.0 A-H	WVH	AVH	9.0	10.00	11.10	1	10	26.0	15.4
SMAJ10CA-H	SMAJ10 A-H	WXH	AXH	10.0	11.10	12.30	1	5	23.5	17.0
SMAJ11CA-H	SMAJ11 A-H	WZH	AZH	11.0	12.20	13.50	1	1	22.0	18.2
SMAJ12CA-H	SMAJ12 A-H	XEH	BEH	12.0	13.30	14.70	1	1	20.1	19.9
SMAJ13CA-H	SMAJ13A-H	XGH	BGH	13.0	14.40	15.90	1	1	18.6	21.5
SMAJ14CA-H	SMAJ14A-H	XKH	BKH	14.0	15.60	17.20	1	1	17.2	23.2
SMAJ15CA-H	SMAJ15A-H	XMH	BMH	15.0	16.70	18.50	1	1	16.4	24.4
SMAJ16CA-H	SMAJ16A-H	XPH	BPH	16.0	17.80	19.70	1	1	15.4	26.0
SMAJ17CA-H	SMAJ17A-H	XRH	BRH	17.0	18.90	20.90	1	1	14.5	27.6
SMAJ18CA-H	SMAJ18A-H	XTH	BTH	18.0	20.00	22.10	1	1	13.7	29.2
SMAJ20CA-H	SMAJ20A-H	XVH	BVH	20.0	22.20	24.50	1	1	12.3	32.4
SMAJ22CA-H	SMAJ22A-H	XXH	BXH	22.0	24.40	26.90	1	1	11.3	35.5
SMAJ24CA-H	SMAJ24A-H	XZH	BZH	24.0	26.70	29.50	1	1	10.3	38.9
SMAJ26CA-H	SMAJ26A-H	YEH	CEH	26.0	28.90	31.90	1	1	9.5	42.1
SMAJ28CA-H	SMAJ28A-H	YGH	CGH	28.0	31.10	34.40	1	1	8.8	45.4
SMAJ30CA-H	SMAJ30A-H	YKH	CKH	30.0	33.30	36.80	1	1	8.3	48.4
SMAJ33CA-H	SMAJ33A-H	YMH	CMH	33.0	36.70	40.60	1	1	7.5	53.3
SMAJ36CA-H	SMAJ36A-H	YPH	CPH	36.0	40.00	44.20	1	1	6.9	58.1
SMAJ40CA-H	SMAJ40A-H	YRH	CRH	40.0	44.40	49.10	1	1	6.2	64.5
SMAJ43CA-H	SMAJ43A-H	YTH	CTH	43.0	47.80	52.80	1	1	5.8	69.4
SMAJ45CA-H	SMAJ45A-H	YVH	CVH	45.0	50.00	55.30	1	1	5.5	72.7
SMAJ48CA-H	SMAJ48A-H	YXH	CXH	48.0	53.30	58.90	1	1	5.2	77.4
SMAJ51CA-H	SMAJ51A-H	YZH	CZH	51.0	56.70	62.70	1	1	4.9	82.4
SMAJ54CA-H	SMAJ54A-H	ZEH	REH	54.0	60.00	66.30	1	1	4.6	87.1
SMAJ58CA-H	SMAJ58A-H	ZGH	RGH	58.0	64.40	71.20	1	1	4.3	93.6
SMAJ60CA-H	SMAJ60A-H	ZKH	RKH	60.0	66.70	73.70	1	1	4.1	96.8
SMAJ64CA-H	SMAJ64A-H	ZMH	RMH	64.0	71.10	78.60	1	1	3.9	103.0
SMAJ70CA-H	SMAJ70A-H	ZPH	RPH	70.0	77.80	86.00	1	1	3.5	113.0
SMAJ75CA-H	SMAJ75A-H	ZRH	RRH	75.0	83.30	92.10	1	1	3.3	121.0
SMAJ78CA-H	SMAJ78A-H	ZTH	RTH	78.0	86.70	95.80	1	1	3.2	126.0
SMAJ85CA-H	SMAJ85A-H	ZVH	RVH	85.0	94.4	104.0	1	1	2.9	137.0

Rating & Characteristic Curves

Figure 1- Pulse Derating Curve

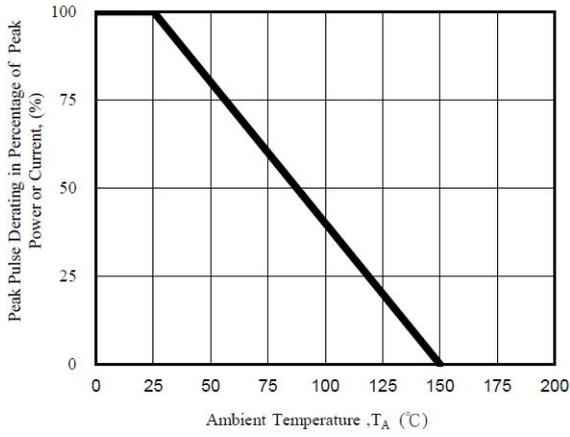


Figure 2- Maximum Non-Repetitive Surge Current

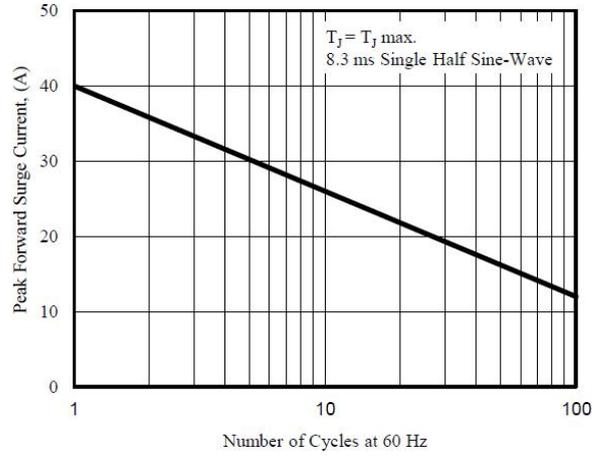


Figure 3- Steady State Power Derating Curve

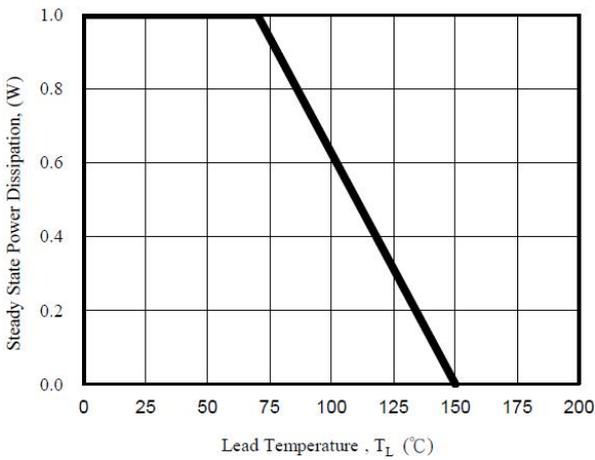


Figure 4- Peak Pulse Power Rating Curve

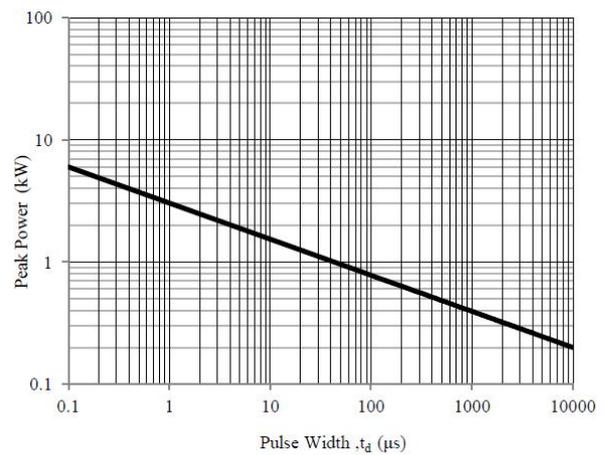


Figure 5- Pulse Waveform

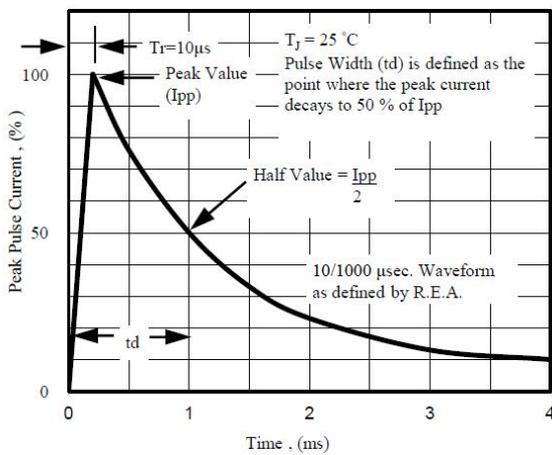


Figure 6- Typical Junction Capacitance

