

1000 Watts Surface Mount Transient Voltage Suppressor

FEATURES

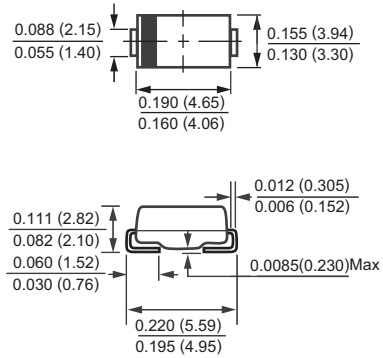
- * Peak pulse power:1000 W (10/1000 μ s)
- * Plastic package has underwriters laboratory
- * Glass passivated chip construction
- * 1000 watt surge capability at 1ms
- * Excellent clamping capability
- * Low zener impedance
- * Fast response time

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.



DO-214AA



Dimensions in inches and (millimeters)

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	1000	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P _D	5.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only ⁽²⁾	I _{FSM}	100	A
Typical Current Squared Time	I ² t	41.5	A ² S
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

NOTES : 1. Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig.2.
2. V_F = 3.5V for devices of V_{br} ≤ 50V and V_F = 5.0V Max for devices of V_{br} > 50V .

RATING AND CHARACTERISTICS CURVES (1KSMB SERIES)

FIG. 1 PEAK PULSE POWER RATING CURVE

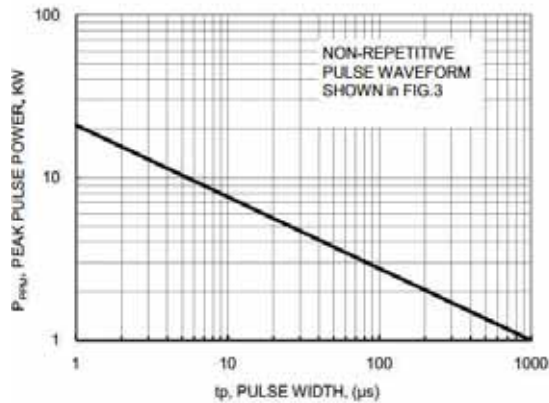


FIG.2 PEAK PULSE POWER DERATING CURVE

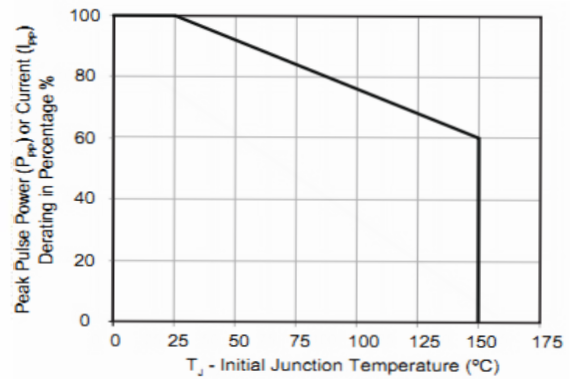


FIG. 3 CLAMPING POWER PULSE WAVEFORM

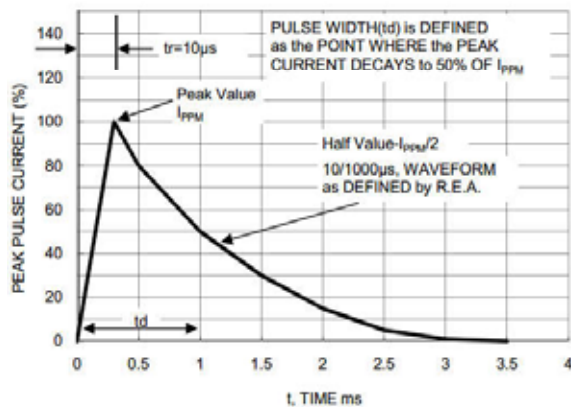


FIG. 4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY

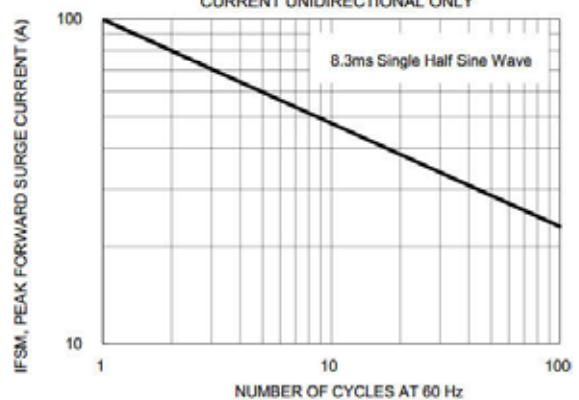
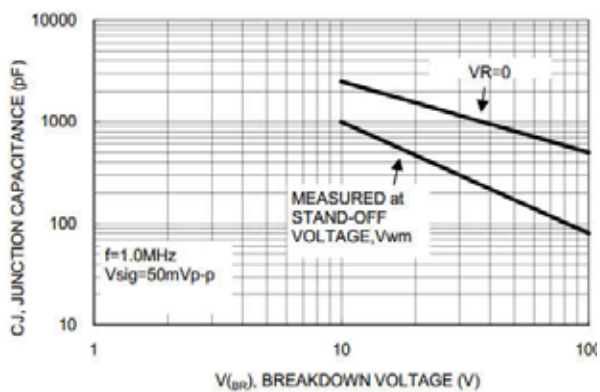
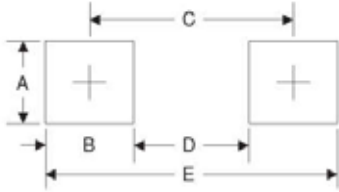


FIG. 5 TYPICAL JUNCTION CAPACITANCE



Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage VBR @ Ir		Test Current	Max. Clamping Voltage @ IPP	Max. Peak Pulse Current	Max. Reverse Leakage @ VRWM
UNI-POLAR	BI-POLAR	UNI	BI	VRWM(V)	Min.(V)	Max.(V)	Ir(mA)	Vc MAX.(V)	IPP(A)	IR(uA)
1KSMB10A	1KSMB10CA	1AE	1WE	8.6	9.50	10.50	1.0	14.5	69.00	10.0
1KSMB11A	1KSMB11CA	1AG	1WG	9.4	10.50	11.60	1.0	15.6	64.10	5.0
1KSMB12A	1KSMB12CA	1AK	1WK	10.2	11.40	12.60	1.0	16.7	59.90	5.0
1KSMB13A	1KSMB13CA	1AM	1WM	11.1	12.40	13.70	1.0	18.2	54.90	5.0
1KSMB15A	1KSMB15CA	1AP	1WP	12.8	14.30	15.80	1.0	21.2	47.20	5.0
1KSMB16A	1KSMB16CA	1AR	1WR	13.6	15.20	16.80	1.0	22.5	44.40	1.0
1KSMB18A	1KSMB18CA	1AT	1WT	15.3	17.10	18.90	1.0	25.5	39.20	1.0
1KSMB20A	1KSMB20CA	1AV	1WV	17.1	19.00	21.00	1.0	27.7	36.10	1.0
1KSMB22A	1KSMB22CA	1AX	1WX	18.8	20.90	23.10	1.0	30.6	32.70	1.0
1KSMB24A	1KSMB24CA	1AZ	1WZ	20.5	22.80	25.20	1.0	33.3	30.10	1.0
1KSMB27A	1KSMB27CA	1BE	1XE	23.1	25.70	28.40	1.0	37.5	26.70	1.0
1KSMB30A	1KSMB30CA	1BG	1XG	25.6	28.50	31.50	1.0	41.4	24.20	1.0
1KSMB33A	1KSMB33CA	1BK	1XK	28.2	31.40	34.70	1.0	45.7	21.90	1.0
1KSMB36A	1KSMB36CA	1BM	1XM	30.8	34.20	37.80	1.0	49.9	20.00	1.0
1KSMB39A	1KSMB39CA	1BP	1XP	33.3	37.10	41.00	1.0	53.9	18.60	1.0
1KSMB43A	1KSMB43CA	1BR	1XR	36.8	40.90	45.20	1.0	59.3	16.90	1.0
1KSMB47A	1KSMB47CA	1BT	1XT	40.2	44.70	49.40	1.0	64.8	15.40	1.0
1KSMB51A	1KSMB51CA	1BV	1XV	43.6	48.50	53.60	1.0	70.1	14.30	1.0
1KSMB56A	1KSMB56CA	1BX	1XX	47.8	53.20	58.80	1.0	77.0	13.00	1.0
1KSMB62A	1KSMB62CA	1BZ	1XZ	53.0	58.90	65.10	1.0	85.0	11.80	1.0
1KSMB68A	1KSMB68CA	1CE	1YE	58.1	64.60	71.40	1.0	92.0	10.90	1.0
1KSMB75A	1KSMB75CA	1CG	1YG	64.1	71.30	78.80	1.0	103.0	9.70	1.0
1KSMB82A	1KSMB82CA	1CK	1YK	70.1	77.90	86.10	1.0	113.0	8.80	1.0
1KSMB91A	1KSMB91CA	1CM	1YM	77.8	86.50	95.50	1.0	125.0	8.00	1.0
1KSMB100A	1KSMB100CA	1CP	1YP	85.5	95.00	105.00	1.0	137.0	7.30	1.0

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
B	2.5	0.098
C	4.3	0.169
D	1.8	0.071
E	6.8	0.268

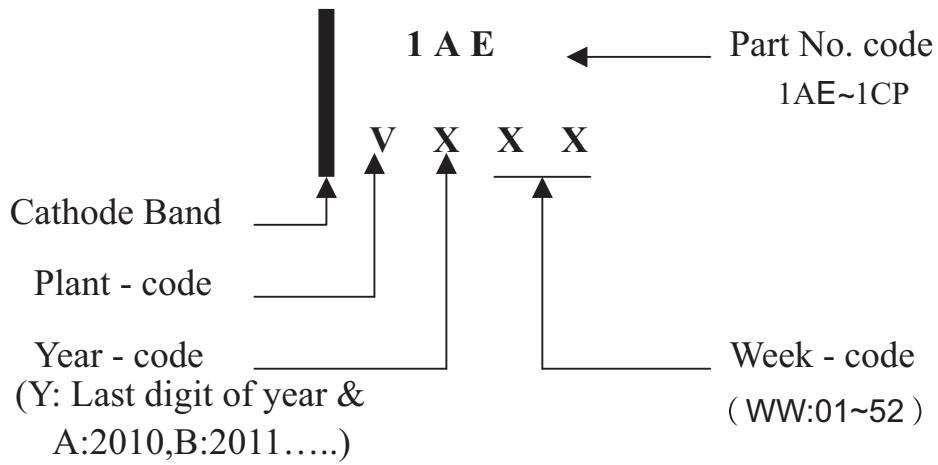
PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

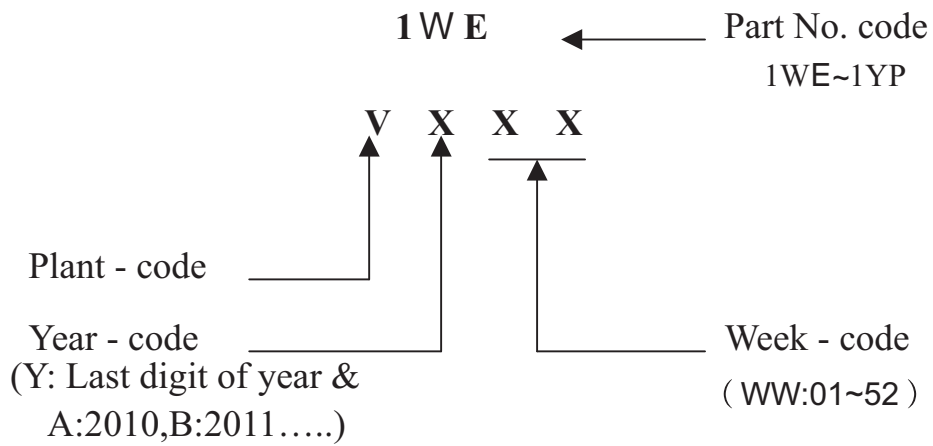
PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMB	-W/T	3,000	6,000	---	---	330	360*355*360	48,000	13.90

Marking on the body

1KSMBxxA



1KSMBxxCA



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