

Surface Mount Transient Voltage Suppressor Rectifiers

Reverse Voltage - 11.0 to 60 V

6000 Watt Peak Pulse Power

Features

- Glass passivated chip
- 6000 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data

- Case: DO-214AB/(SMC) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

Maximum Ratings & Characteristics

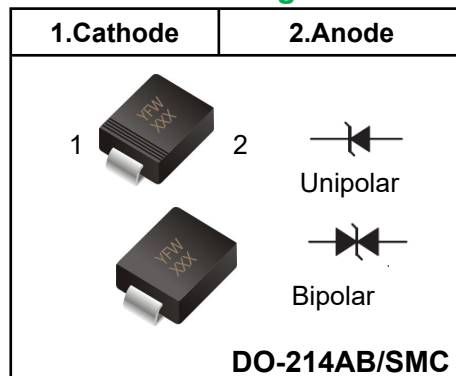
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform(1)	P_{PP}	6000	W
Peak pulse current with a 10/1000 us waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75\text{ }^{\circ}\text{C}$	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only(2)	I_{FSM}	300	A
Maximum instantaneous forward voltage at 100 A for unidirectional only(3)	V_F	3.5/6.5	V
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

Note:

- 1)Non-repetitive current pulse per Fig.5 and derated above $T_A = 25\text{ }^{\circ}\text{C}$ 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) $V_F < 3.5\text{V}$ for devices of $V_{BR} < 200\text{V}$ and $V_F < 6.5\text{V}$ for devices of $V_{BR} > 201\text{V}$.

Pinning



Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage $V_{BR} @ I_T$		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
6.0SMDJ11A	6.0SMDJ11CA	6PEN	6BEN	11.0	12.20	13.50	10	18.2	332.97	800
6.0SMDJ12A	6.0SMDJ12CA	6PEP	6BEP	12.0	13.30	14.70	10	19.9	304.52	800
6.0SMDJ13A	6.0SMDJ13CA	6PEQ	6BEQ	13.0	14.40	15.90	10	21.5	281.86	500
6.0SMDJ14A	6.0SMDJ14CA	6PER	6BER	14.0	15.60	17.20	10	23.2	261.21	200
6.0SMDJ15A	6.0SMDJ15CA	6PES	6BES	15.0	16.70	18.50	1	24.4	248.36	100
6.0SMDJ16A	6.0SMDJ16CA	6PET	6BET	16.0	17.80	19.70	1	26.0	233.08	50
6.0SMDJ17A	6.0SMDJ17CA	6PEU	6BEU	17.0	18.90	20.90	1	27.6	219.57	20
6.0SMDJ18A	6.0SMDJ18CA	6PEV	6BEV	18.0	20.00	22.10	1	29.2	207.53	10
6.0SMDJ20A	6.0SMDJ20CA	6PEW	6BEW	20.0	22.20	24.50	1	32.4	187.04	5
6.0SMDJ22A	6.0SMDJ22CA	6PEX	6BEX	22.0	24.40	26.90	1	35.5	170.70	5
6.0SMDJ24A	6.0SMDJ24CA	6PEZ	6BEZ	24.0	26.70	29.50	1	38.9	155.78	5
6.0SMDJ26A	6.0SMDJ26CA	6PFE	6BFE	26.0	28.90	31.90	1	42.1	143.94	5
6.0SMDJ28A	6.0SMDJ28CA	6PFG	6BFG	28.0	31.10	34.40	1	45.4	133.48	5
6.0SMDJ30A	6.0SMDJ30CA	6PFK	6BFK	30.0	33.30	36.80	1	48.4	125.21	5
6.0SMDJ33A	6.0SMDJ33CA	6PFM	6BFM	33.0	36.70	40.60	1	53.3	113.70	5
6.0SMDJ36A	6.0SMDJ36CA	6PFP	6BFP	36.0	40.00	44.20	1	58.1	104.30	5
6.0SMDJ40A	6.0SMDJ40CA	6PFR	6BFR	40.0	44.40	49.10	1	64.5	93.95	5
6.0SMDJ43A	6.0SMDJ43CA	6PFT	6BFT	43.0	47.80	52.80	1	69.4	87.32	5
6.0SMDJ45A	6.0SMDJ45CA	6PFV	6BFV	45.0	50.00	55.30	1	72.7	83.36	5
6.0SMDJ48A	6.0SMDJ48CA	6PFX	6BFX	48.0	53.30	58.90	1	77.4	78.29	5
6.0SMDJ51A	6.0SMDJ51CA	6PFZ	6BFZ	51.0	56.70	62.70	1	82.4	73.54	5
6.0SMDJ54A	6.0SMDJ54CA	6PGE	6BGE	54.0	60.00	66.30	1	87.1	69.58	5
6.0SMDJ58A	6.0SMDJ58CA	6PGG	6BGG	58.0	64.40	71.20	1	93.6	64.74	5
6.0SMDJ60A	6.0SMDJ60CA	6PGK	6BGK	60.0	66.70	73.70	1	96.8	62.60	5

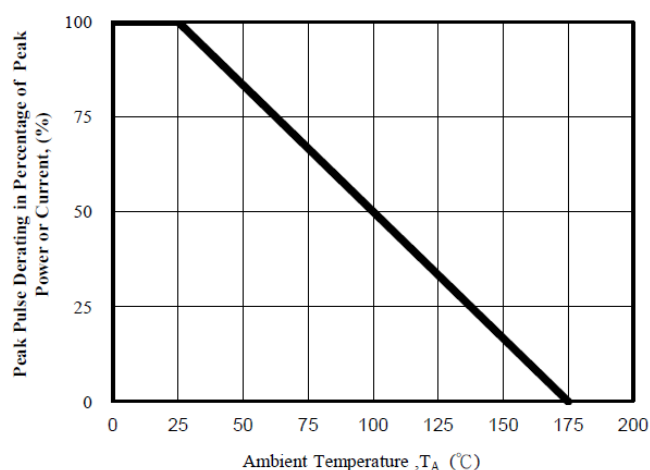


Fig. 3 - Steady State Power Derating Curve

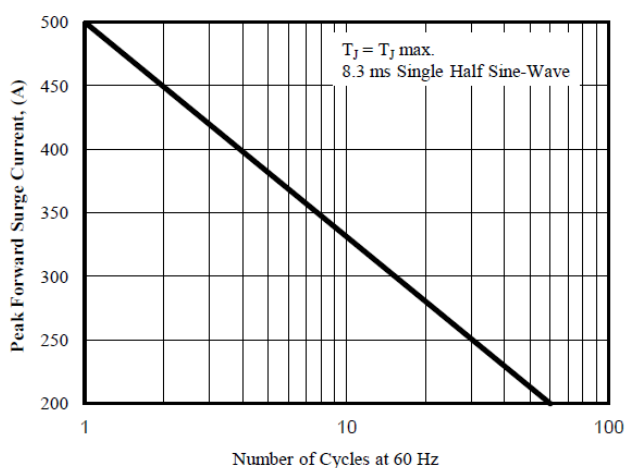


Fig. 4 - Peak Pulse Power Rating Curve

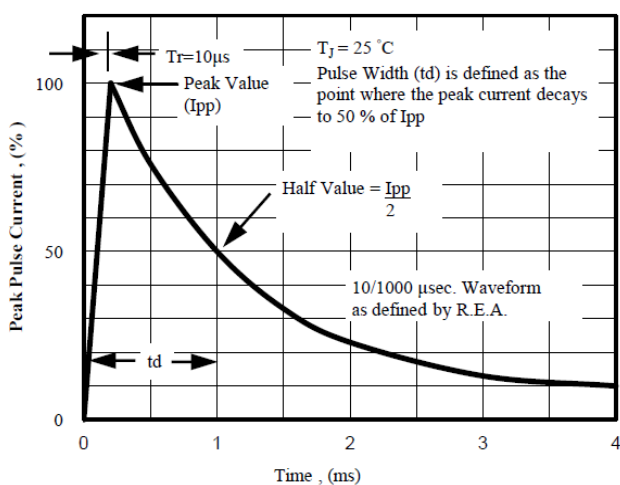
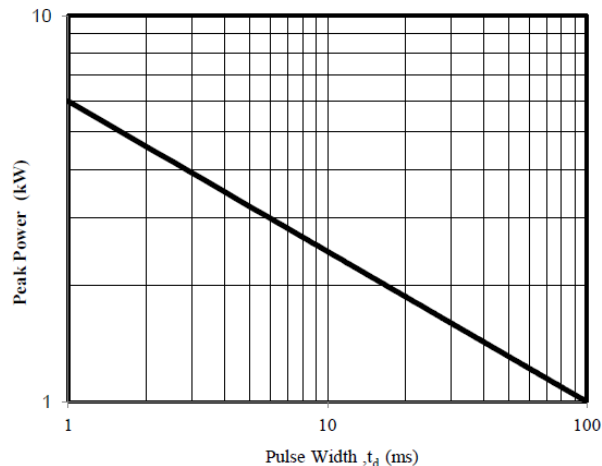
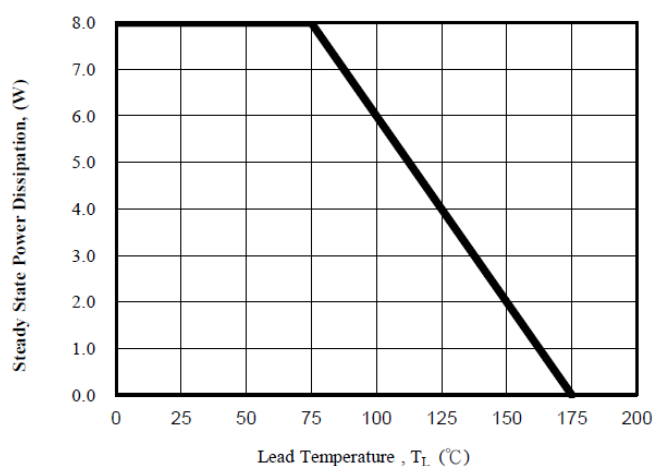


Fig. 5 - Pulse Waveform

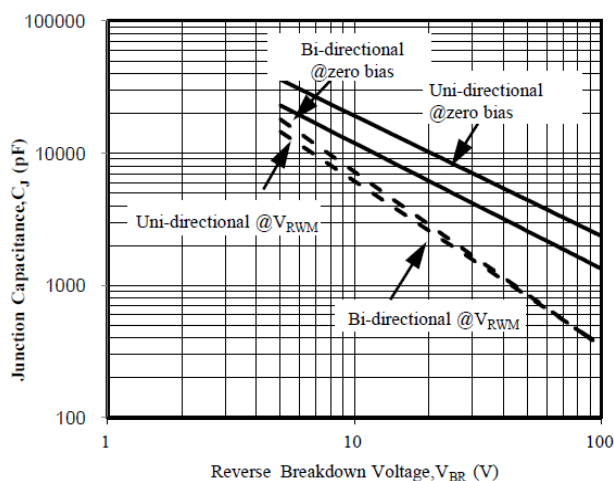
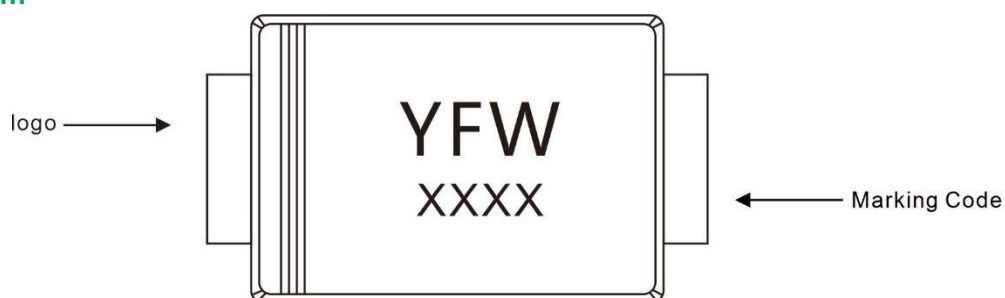


Fig. 6 - Typical Junction Capacitance

Marking Diagram



Ordering information

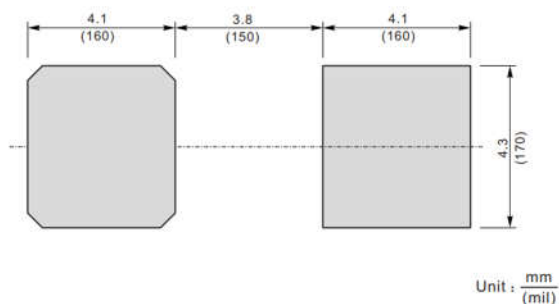
Package	Packing Description	Packing Quantity
DO-214AB SMC	Tape/Reel, 13"reel	3000PCS/Reel 30000PCS/Cartron

Package Dimensions

DO-214AB SMC

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	2.00	2.62	79	103
E	6.5	7.0	256	276
D	5.6	6.2	220	244
E ₁	7.6	8.0	299	315
A ₁	0.05	0.21	2.0	8.3
C	0.15	0.31	5.9	12
L	0.9	1.6	35	63
b	2.75	3.25	108	128

The recommended mounting pad size



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