

Surface Mount Transient Voltage Suppressor Rectifiers

8000 Watt Peak Pulse Power

Reverse Voltage - 12V to 100V

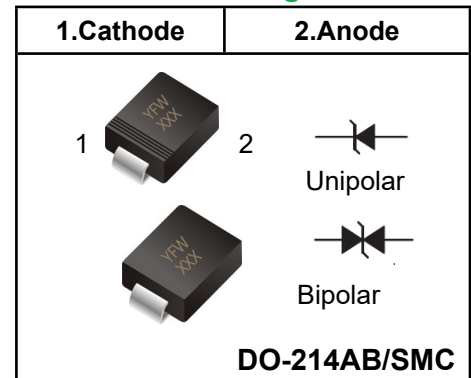
Features

- ◆ Glass passivated chip
- ◆ 8000 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
- ◆ System: Accreditation through IATF16949 System
- ◆ Mounting position: Any

Pinning



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}	8000	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	6.5	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only ⁽²⁾	I_{FSM}	300	A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to+150	°C

Note:

1)Non-repetitive current pulse per Fig.4 and derated above TA= 25 °C per Fig.3;

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

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

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 (uA)
8.0SMDJ12A	8.0SMDJ12CA	8PEP	8BEP	12	13.3	14.7	10	19.9	402.1	800
8.0SMDJ13A	8.0SMDJ13CA	8PEQ	8BEQ	13	14.4	15.9	10	21.5	372.1	500
8.0SMDJ14A	8.0SMDJ14CA	8PER	8BER	14	15.6	17.2	10	23.2	344.9	200
8.0SMDJ15A	8.0SMDJ15CA	8PES	8BES	15	16.7	18.5	1	24.4	327.9	100
8.0SMDJ16A	8.0SMDJ16CA	8PET	8BET	16	17.8	19.7	1	26.0	307.7	50
8.0SMDJ17A	8.0SMDJ17CA	8PEU	8BEU	17	18.9	20.9	1	27.6	290.0	20
8.0SMDJ18A	8.0SMDJ18CA	8PEV	8BEV	18	20.0	22.1	1	29.2	274.0	10
8.0SMDJ20A	8.0SMDJ20CA	8PEW	8BEW	20	22.2	24.5	1	32.4	247.0	5
8.0SMDJ22A	8.0SMDJ22CA	8PEX	8BEX	22	24.4	26.9	1	35.5	225.4	5
8.0SMDJ24A	8.0SMDJ24CA	8PEZ	8BEZ	24	26.7	29.5	1	38.9	205.7	5
8.0SMDJ26A	8.0SMDJ26CA	8PFE	8BFE	26	28.9	31.9	1	42.1	190.1	5
8.0SMDJ28A	8.0SMDJ28CA	8PFG	8BFG	28	31.1	34.4	1	45.4	176.2	5
8.0SMDJ30A	8.0SMDJ30CA	8PFK	8BFK	30	33.3	36.8	1	48.4	165.3	5
8.0SMDJ33A	8.0SMDJ33CA	8PFM	8BFM	33	36.7	40.6	1	53.3	150.1	5
8.0SMDJ36A	8.0SMDJ36CA	8PFP	8BFP	36	40.0	44.2	1	58.1	137.8	5
8.0SMDJ40A	8.0SMDJ40CA	8PFR	8BFR	40	44.4	49.1	1	64.5	124.1	5
8.0SMDJ43A	8.0SMDJ43CA	8PFT	8BFT	43	47.8	52.8	1	69.4	115.3	5
8.0SMDJ45A	8.0SMDJ45CA	8PFV	8BFV	45	50.0	55.3	1	72.7	110.1	5
8.0SMDJ48A	8.0SMDJ48CA	8PFX	8BFX	48	53.3	58.9	1	77.4	103.4	5
8.0SMDJ51A	8.0SMDJ51CA	8PFZ	8BFZ	51	56.7	62.7	1	82.4	97.1	5
8.0SMDJ54A	8.0SMDJ54CA	8PGE	8BGE	54	60.0	66.3	1	87.1	92.0	5
8.0SMDJ58A	8.0SMDJ58CA	8PGG	8BGG	58	64.4	71.2	1	93.6	85.5	5
8.0SMDJ60A	8.0SMDJ60CA	8PGK	8BGK	60	66.7	73.7	1	96.8	82.7	5
8.0SMDJ64A	8.0SMDJ64CA	8PGM	8BGM	64	71.1	78.6	1	103.0	77.7	5
8.0SMDJ70A	8.0SMDJ70CA	8PGP	8BGB	70	77.8	86.0	1	113.0	71.0	5
8.0SMDJ75A	8.0SMDJ75CA	8PGR	8BGR	75	83.3	92.1	1	121.0	66.2	5
8.0SMDJ78A	8.0SMDJ78CA	8PGT	8BGT	78	86.7	95.8	1	126.0	63.5	5
8.0SMDJ85A	8.0SMDJ85CA	8PGV	8BGV	85	94.4	104.0	1	137.0	58.4	5
8.0SMDJ90A	8.0SMDJ90CA	8PGX	8BGX	90	100.0	111.0	1	146.0	55.0	5
8.0SMDJ100A	8.0SMDJ100CA	8PGZ	8BGZ	100	111	123	1	162	49.4	5
8.0SMDJ110A	8.0SMDJ110CA	8PHE	8BHE	110	122	135	1	177	45.2	5

Figure 1 - TVS Transients Clamping Waveform

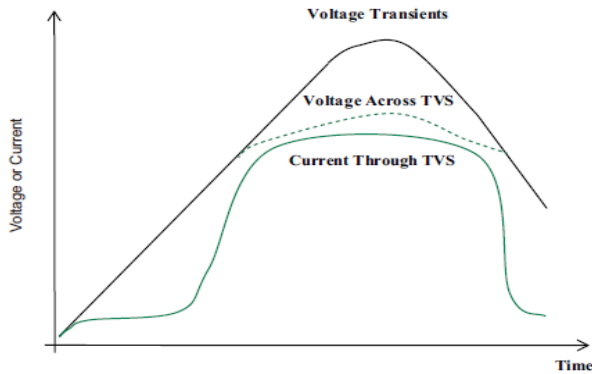


Figure 3 - Peak Pulse Power Derating Curve

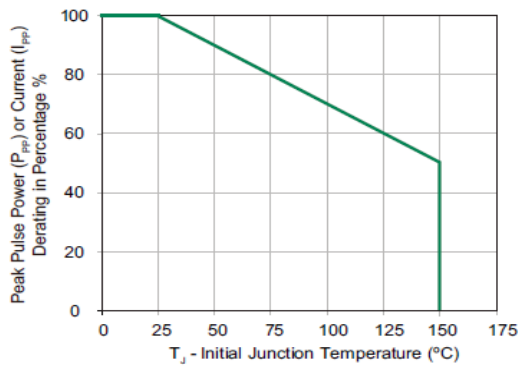


Figure 5 - Typical Junction Capacitance

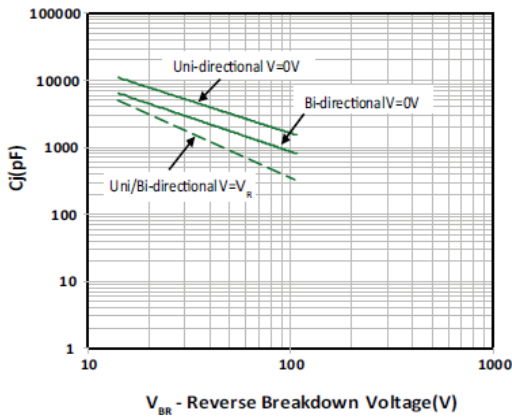


Figure 7 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only

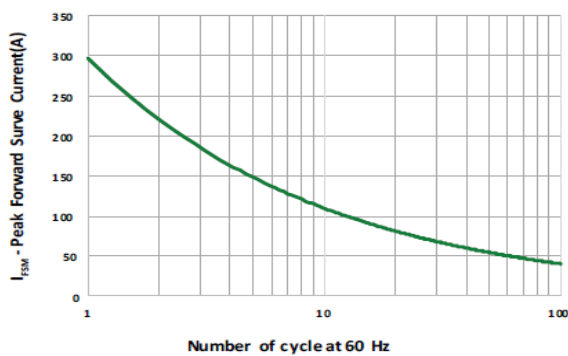


Figure 2 - Peak Pulse Power Rating

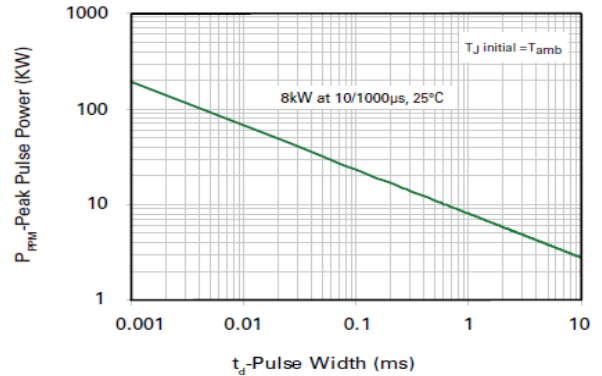


Figure 4 - Pulse Waveform

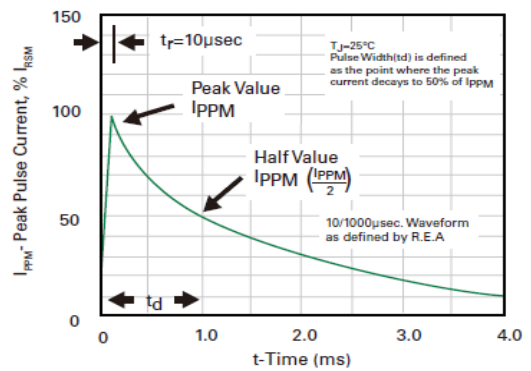


Figure 6 - Typical Transient Thermal Impedance

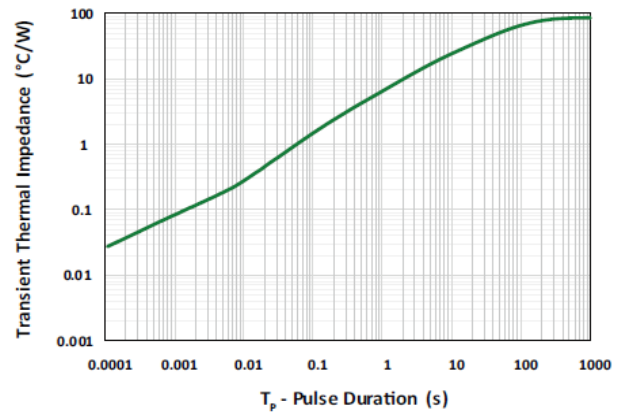
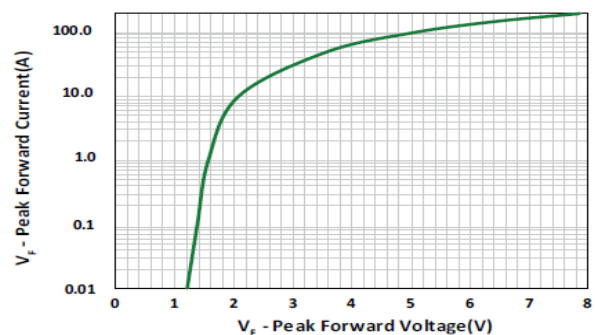
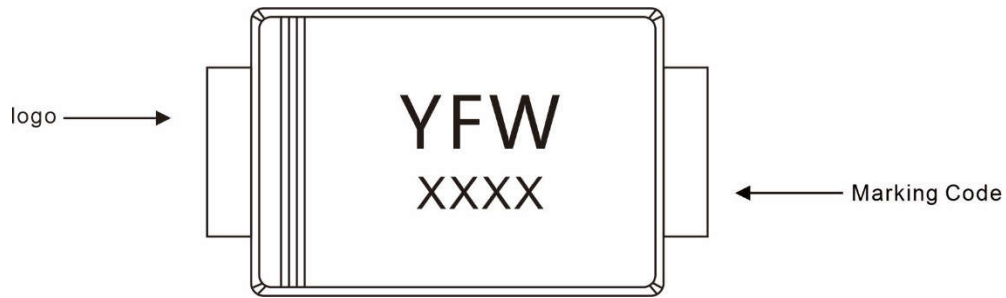


Figure 8 - Peak Forward Voltage Drop vs Peak Forward Current (Typical Values)



Marking Diagram



Ordering information

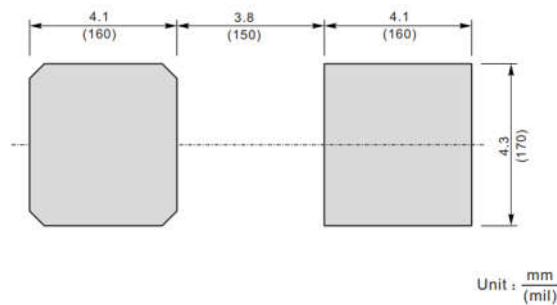
Package	Packing Description	Packing Quantity
DO-214AB SMC	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

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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