

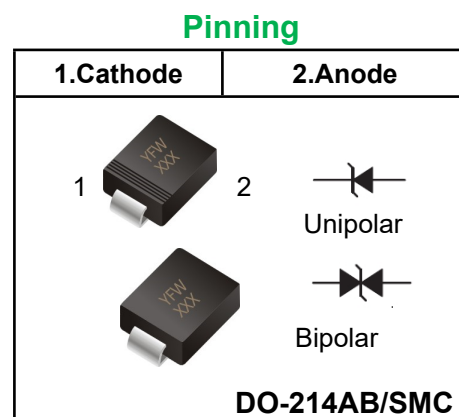
Surface Mount Transient Voltage Suppressor Rectifiers

Reverse Voltage: 5.0V ~ 440 V

5000 Watt Peak Pulse Power

FEATURES

- ◆Glass passivated chip
- ◆5000 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
- ◆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 and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 us waveform (Note 1)	P_{PP}	5000	W
Peak Pulse Current on 10/1000 us waveform (Note 1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at T _L = 75 °C	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only (Note 2)	I_{FSM}	300	A
Maximum instantaneous forward voltage at 100 A for unidirectional only (Note 3)	V_F	3.5/6.5	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 VBR<200V and V_F<6.5V for devices of VBR>201V。

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)	$I_T(mA)$	$V_C \text{ MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
5.0SMDJ5.0A	5.0SMDJ5.0CA	5PDE	5BDE	5	6.4	7	10	9.2	543.5	800
5.0SMDJ6.0A	5.0SMDJ6.0CA	5PDG	5BDG	6	6.67	7.37	10	10.3	485.5	800
5.0SMDJ6.5A	5.0SMDJ6.5CA	5PDK	5BDK	6.5	7.22	7.98	10	11.2	446.5	800
5.0SMDJ7.0A	5.0SMDJ7.0CA	5PDM	5BDM	7	7.78	8.6	10	12	416.7	800
5.0SMDJ7.5A	5.0SMDJ7.5CA	5PDP	5BDP	7.5	8.33	9.21	1	12.9	387.7	800
5.0SMDJ8.0A	5.0SMDJ8.0CA	5PDR	5BDR	8	8.89	9.83	1	13.6	367.7	800
5.0SMDJ8.5A	5.0SMDJ8.5CA	5PDT	5BDT	8.5	9.44	10.4	1	14.4	347.2	800
5.0SMDJ9.0A	5.0SMDJ9.0CA	5PDV	5BDV	9	10	11.1	1	15.4	324.7	800
5.0SMDJ10A	5.0SMDJ10CA	5PDX	5BDX	10	11.1	12.3	1	17	294.2	800
5.0SMDJ11A	5.0SMDJ11CA	5PEN	5BEN	11	12.2	13.5	10	18.2	277.5	800
5.0SMDJ12A	5.0SMDJ12CA	5PEP	5BEP	12	13.3	14.7	10	19.9	253.8	800
5.0SMDJ13A	5.0SMDJ13CA	5PEQ	5BEQ	13	14.4	15.9	10	21.5	234.9	500
5.0SMDJ14A	5.0SMDJ14CA	5PER	5BER	14	15.6	17.2	10	23.2	217.7	200
5.0SMDJ15A	5.0SMDJ15CA	5PES	5BES	15	16.7	18.5	1	24.4	207	100
5.0SMDJ16A	5.0SMDJ16CA	5PET	5BET	16	17.8	19.7	1	26	194.2	50
5.0SMDJ17A	5.0SMDJ17CA	5PEU	5BEU	17	18.9	20.9	1	27.6	183	20
5.0SMDJ18A	5.0SMDJ18CA	5PEV	5BEV	18	20	22.1	1	29.2	172.9	10
5.0SMDJ20A	5.0SMDJ20CA	5PEW	5BEW	20	22.2	24.5	1	32.4	155.9	5
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22	24.4	26.9	1	35.5	142.3	5
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24	26.7	29.5	1	38.9	129.8	5
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26	28.9	31.9	1	42.1	120	5
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28	31.1	34.4	1	45.4	111.2	5
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30	33.3	36.8	1	48.4	104.3	5
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33	36.7	40.6	1	53.3	94.75	5
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36	40	44.2	1	58.1	86.92	5
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40	44.4	49.1	1	64.5	78.29	5
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43	47.8	52.8	1	69.4	72.77	5
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	45	50	55.3	1	72.7	69.46	5
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48	53.3	58.9	1	77.4	65.25	5
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51	56.7	62.7	1	82.4	61.29	5
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54	60	66.3	1	87.1	57.98	5
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58	64.4	71.2	1	93.6	53.95	5
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60	66.7	73.7	1	96.8	52.17	5
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64	71.1	78.6	1	103	49.03	5
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70	77.8	86	1	113	44.69	5
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75	83.3	92.1	1	121	41.74	5
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78	86.7	95.8	1	126	40.08	5
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85	94.4	104	1	137	36.86	5
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90	100	111	1	146	34.59	5
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100	111	123	1	162	31.17	5
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	110	122	135	1	177	28.53	5
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	120	133	147	1	193	26.17	5
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	130	144	159	1	209	24.16	5
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	150	167	185	1	243	20.78	5
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHP	160	178	197	1	259	19.5	5
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	170	189	209	1	275	18.36	5
5.0SMDJ180A	5.0SMDJ180CA	5PHT	5BHT	180	200	220	1	291.6	17.32	5
5.0SMDJ190A	5.0SMDJ190CA	5PHV	5DHV	190	211	232	1	307.8	16.41	5
5.0SMDJ200A	5.0SMDJ200CA	5PHX	5DHX	200	224	247	1	324	15.59	5
5.0SMDJ210A	5.0SMDJ210CA	5PHZ	5DHZ	210	231	268	1	340	14.85	5
5.0SMDJ220A	5.0SMDJ220CA	5PIE	5DIE	220	246	272	1	356	14.19	5
5.0SMDJ250A	5.0SMDJ250CA	5PIG	5DIG	250	279	309	1	405	12.47	5
5.0SMDJ300A	5.0SMDJ300CA	5PIK	5DIK	300	335	371	1	486	10.39	5
5.0SMDJ350A	5.0SMDJ350CA	5PIM	5DIM	350	391	432	1	567	8.91	5
5.0SMDJ400A	5.0SMDJ400CA	5PIP	5DIP	400	447	494	1	648	7.79	5
5.0SMDJ440A	5.0SMDJ440CA	5PIR	5DIR	440	492	543	1	713	7	5

Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

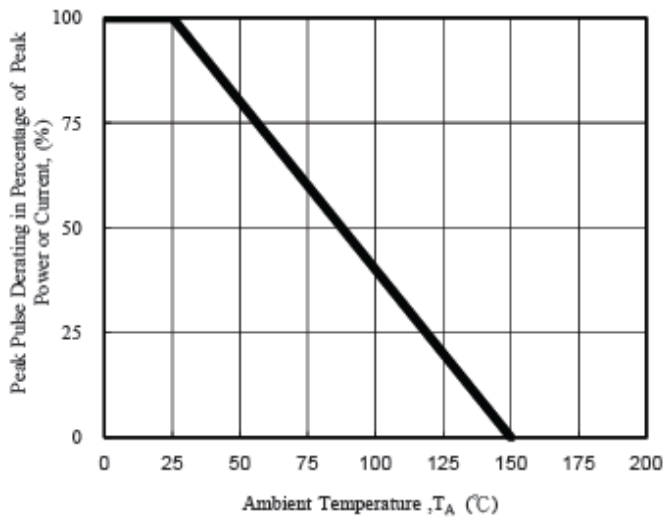


Fig. 1 - Pulse Derating Curve

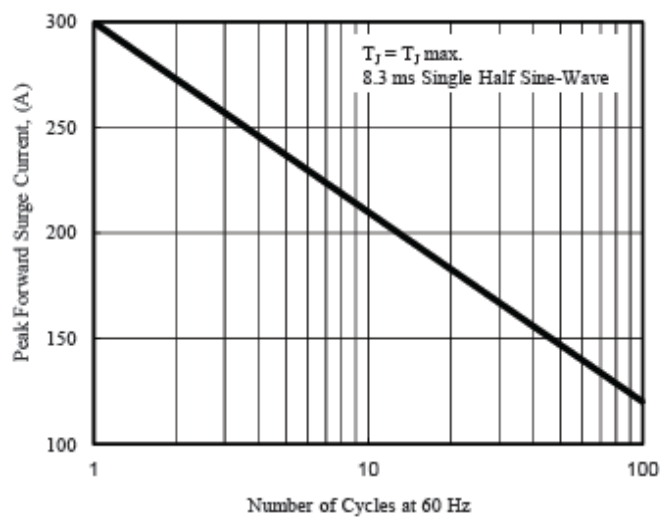


Fig. 2 - Maximum Non-Repetitive Surge Current

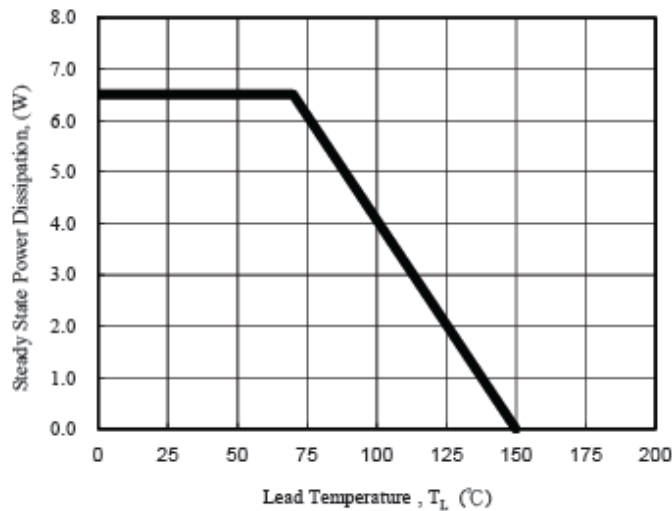


Fig. 3 - Steady State Power Derating Curve

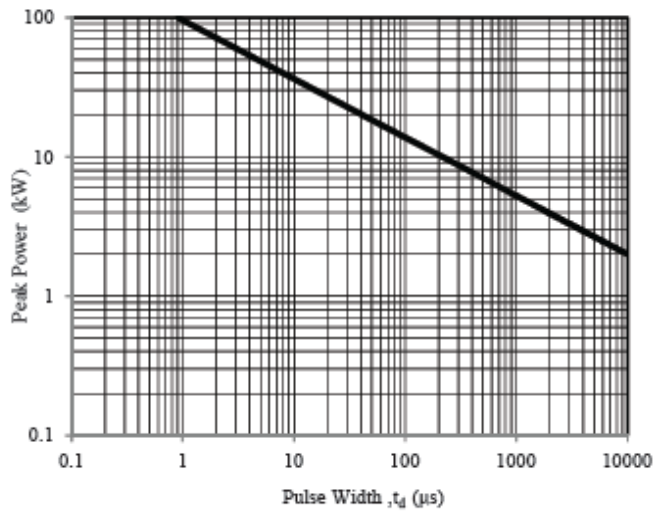


Fig. 4 - Peak Pulse Power Rating Curve

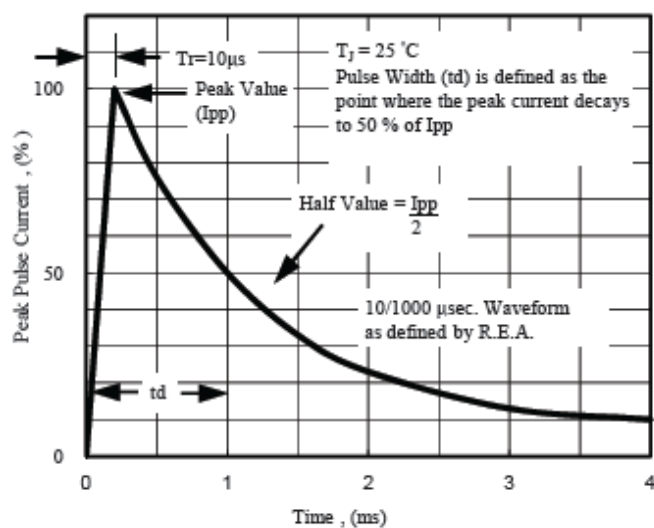


Fig. 5 - Pulse Waveform

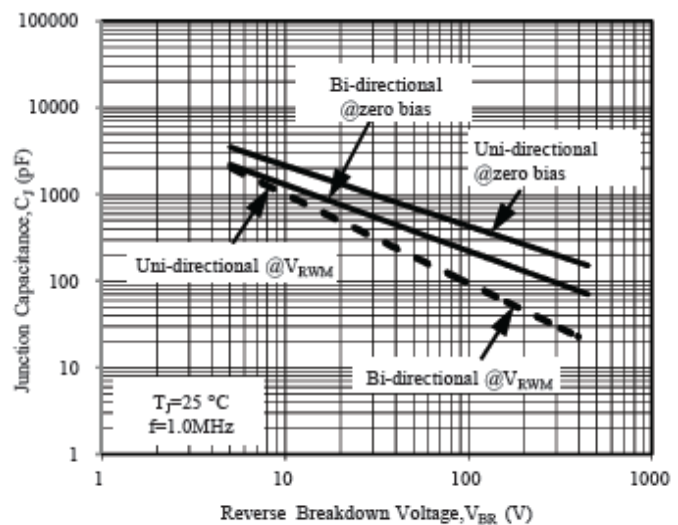
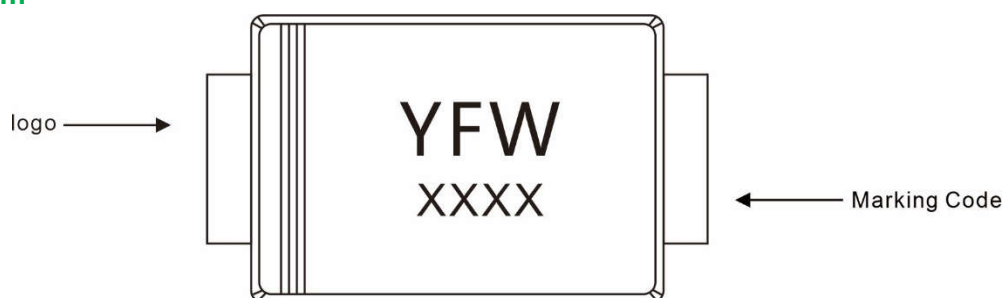


Fig. 6 - Typical Junction Capacitance

Marking Diagram



Ordering information

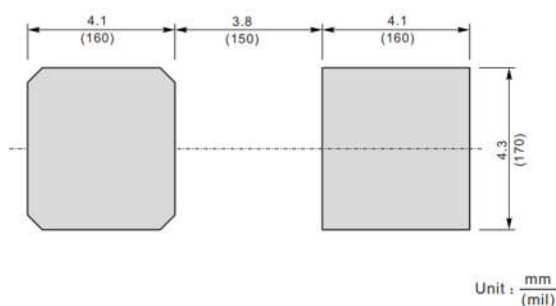
Package	Packing Description	Packing Quantity
DO-214AB SMC	Tape/Reel, 13"reel	3000PCS/Reel 30000PCS/Carton

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



Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.