

Transient Voltage Suppressor power 1500watts

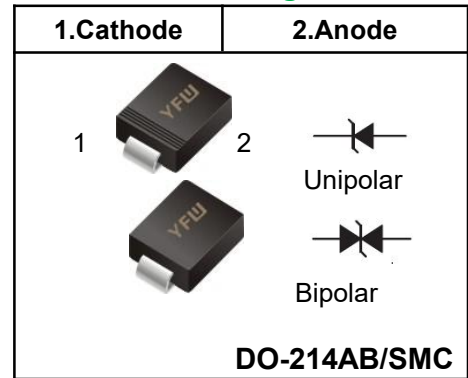
FEATURES

- ◆Excellent clamping capability
- ◆Low leakage current
- ◆High surge capability
- ◆Glass passivated chip
- ◆Epoxy resin package
- ◆Built-in strain relief
- ◆Will not fatigue
- ◆RoHS Compliant
- ◆Fast response time:
◆typically less than 1.0ps from 0 Volts to VBR min

MECHANICAL DATA

- ◆Case: DO-214AB/SMC
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 0.22g /0.0077oz

Pinning



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

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation(Note1)(Note2)	P_{PPM}	1500	W
Steady State Power Dissipation(Note3)	P_D	6.5	W
Peak Forward Surge Current(Note4)	I_{FSM}	200	A
Maximum Instantaneous Forward Voltage at 100A(Note5)	V_{FM}	3.5/5	V
Typical Thermal Resistance Junction to Lead	R_{θJL}	15	°C/W
Typical Thermal Resistance Junction to Ambient	R_{θJA}	75	°C/W
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Notes1: Non-repetitive current pulse , 10/1000us Waveform.

Notes2: Mounted on copper pad area of 8×8mm to each terminal.

Notes3: Infinite HeatSink at T_L=50°C

Notes4: Measured on 8.3ms single half sine wave or equivalent square wave, duty cycle=4 perminute maximum.

Notes5: For UnidirectionalOnly, V_{FM}<3.5V for V_{BR}≤200V and V_{FM}<5.0V for V_{BR}≥201V.

Electrical Characteristics (TA=25°C unless otherwise)

Part Number (Uni)	Part Number (Bi)	Marking		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{pp} (V)	Maximum Peak Pulse Current I_{pp} (A)	Maximum Reverse Leakage I_R @ V_R (pA)	Agency Approval
		Uni	Bi		Min	Max					
1.5SMC6.8A	1.5SMC6.8CA	YFW 6V8A	YFW 6V8C	5.8	6.45	7.14	10	10.5	144.8	1000	X
1.5SMC7.5A	1.5SMC7.5CA	YFW 7V5A	YFW 7V5C	6.4	7.13	7.88	10	11.3	134.5	500	X
1.5SMC8.2A	1.5SMC8.2CA	YFW 8V2A	YFW 8V2C	7.02	7.79	8.61	10	12.1	125.6	200	X
1.5SMC9.1A	1.5SMC9.1CA	YFW 9V1A	YFW 9V1C	7.78	8.65	9.5	1	13.4	113.4	50	X
1.5SMC10A	1.5SMC10CA	YFW 10A	YFW 10C	8.55	9.5	10.5	1	14.5	104.8	10	X
1.5SMC11A	1.5SMC11CA	YFW 11A	YFW 11C	9.4	10.5	11.6	1	15.6	97.4	5	X
1.5SMC12A	1.5SMC12CA	YFW 12A	YFW 12C	10.2	11.4	12.6	1	16.7	91	5	X
1.5SMC13A	1.5SMC13CA	YFW 13A	YFW 13C	11.1	12.4	13.7	1	18.2	83.5	1	X
1.5SMC15A	1.5SMC15CA	YFW 15A	YFW 15C	12.8	14.3	15.8	1	21.2	71.7	1	X
1.5SMC16A	1.5SMC16CA	YFW 16A	YFW 16C	13.6	15.2	16.8	1	22.5	67.6	1	X
1.5SMC18A	1.5SMC18CA	YFW 18A	YFW 18C	15.3	17.1	18.9	1	25.2	60.3	1	X
1.5SMC20A	1.5SMC20CA	YFW 20A	YFW 20C	17.1	19	21	1	27.7	54.9	1	X
1.5SMC22A	1.5SMC22CA	YFW 22A	YFW 22C	18.8	20.9	23.1	1	30.6	49.7	1	X
1.5SMC24A	1.5SMC24CA	YFW 24A	YFW 24C	20.5	22.8	25.2	1	33.2	45.8	1	X
1.5SMC27A	1.5SMC27CA	YFW 27A	YFW 27C	23.1	25.7	28.4	1	37.5	40.5	1	X
1.5SMC30A	1.5SMC30CA	YFW 30A	YFW 30C	25.6	28.5	31.5	1	41.4	36.7	1	X
1.5SMC33A	1.5SMC33CA	YFW 33A	YFW 33C	28.2	31.4	34.7	1	45.7	33.3	1	X
1.5SMC36A	1.5SMC36CA	YFW 36A	YFW 36C	30.8	34.2	37.8	1	49.9	30.5	1	X
1.5SMC39A	1.5SMC39CA	YFW 39A	YFW 39C	33.3	37.1	41	1	53.9	28.2	1	X
1.5SMC43A	1.5SMC43CA	YFW 43A	YFW 43C	36.8	40.9	45.2	1	59.3	25.6	1	X
1.5SMC47A	1.5SMC47CA	YFW 47A	YFW 47C	40.2	44.7	49.4	1	64.8	23.5	1	X
1.5SMC51A	1.5SMC51CA	YFW 51A	YFW 51C	43.6	48.5	53.6	1	70.1	21.7	1	X
1.5SMC56A	1.5SMC56CA	YFW 56A	YFW 56C	47.80	53.2	58.8	1	77.0	19.7	1	X
1.5SMC62A	1.5SMC62CA	YFW 62A	YFW 62C	53	58.9	65.1	1	85	17.9	1	X
1.5SMC68A	1.5SMC68CA	YFW 68A	YFW 68C	58.1	64.6	71.4	1	92	16.5	1	X
1.5SMC75A	1.5SMC75CA	YFW 75A	YFW 75C	64.1	71.3	78.8	1	103	14.8	1	X
1.5SMC82A	1.5SMC82CA	YFW 82A	YFW 82C	70.1	77.9	86.1	1	113	13.5	1	X
1.5SMC91A	1.5SMC91CA	YFW 91A	YFW 91C	77.8	86.5	95.5	1	125	12.2	1	X
1.5SMC100A	1.5SMC100CA	YFW 100A	YFW 100C	85.5	95	105	1	137	11.1	1	X
1.5SMC110A	1.5SMC110CA	YFW 110A	YFW 110C	94	105	116	1	152	10	1	X
1.5SMC120A	1.5SMC120CA	YFW 120A	YFW 120C	102	114	126	1	165	9.2	1	X
1.5SMC130A	1.5SMC130CA	YFW 130A	YFW 130C	111	124	137	1	179	8.5	1	X
1.5SMC150A	1.5SMC150CA	YFW 150A	YFW 150C	128	143	158	1	207.0	7.3	1	X
1.5SMC160A	1.5SMC160CA	YFW 160A	YFW 160C	136	152	168	1	219	6.9	1	X
1.5SMC170A	1.5SMC170CA	YFW 170A	YFW 170C	145	162	179	1	234	6.5	1	X
1.5SMC180A	1.5SMC180CA	YFW 180A	YFW 180C	154	171	189	1	246	6.2	1	X
1.5SMC200A	1.5SMC200CA	YFW 200A	YFW 200C	171	190	210	1	274	5.5	1	X
1.5SMC220A	1.5SMC220CA	YFW 220A	YFW 220C	185	209	231	1	328	4.6	1	X
1.5SMC250A	1.5SMC250CA	YFW 250A	YFW 250C	214	237	263	1	344	4.4	1	X
1.5SMC300A	1.5SMC300CA	YFW 300A	YFW 300C	256	285	315	1	414	3.7	1	X
1.5SMC350A*	1.5SMC350CA*	YFW 350A	YFW 350C	300	332	368	1	482	4.2	1	X
1.5SMC400A*	1.5SMC400CA*	YFW 400A	YFW 400C	342	380	420	1	548	3.7	1	X
1.5SMC440A*	1.5SMC440CA*	YFW 440A	YFW 440C	376	418	462	1	602	3.4	1	X
1.5SMC480A*	1.5SMC480CA*	YFW 480A	YFW 480C	408	456	504	1	658	3.1	1	X

1.5SMC510A*	1.5SMC510CA*	YFW 510A	YFW 510C	434	485	535	1	698	2.9	1	X
1.5SMC530A*	1.5SMC530CA*	YFW 530A	YFW 530C	451	503.5	556.5	1	725	2.8	1	X
1.5SMC540A*	1.5SMC540CA*	YFW 540A	YFW 540C	460	513	567	1	740	2.8	1	X
1.5SMC550A*	1.5SMC550CA*	YFW 550A	YFW 550C	468	522.5	577.5	1	760	2.7	1	X
1.5SMC600A*	1.5SMC600CA*	YFW 600A	YFW 600C	512	570	630	1	828	2.5	1	-

For bidirectional type having VR of 10 volts and less, the IR limit is double.

For parts without A , the VBR is $\pm 10\%$ and Vc is 5% higher than with A parts, the parts without A are currently available, but not recommended for new designs. The parts with A are preferred.

For stack-die parts, use * to label the part number.

FIG1: Peak Pulse Power Rating Curve

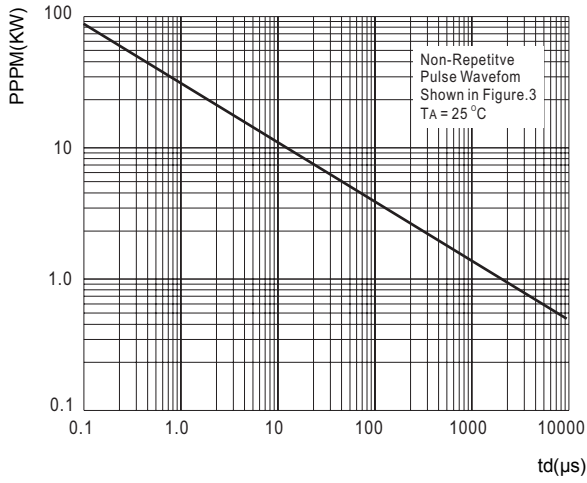


FIG2: Pulse Power or Current vs. Initial Junction Temperature

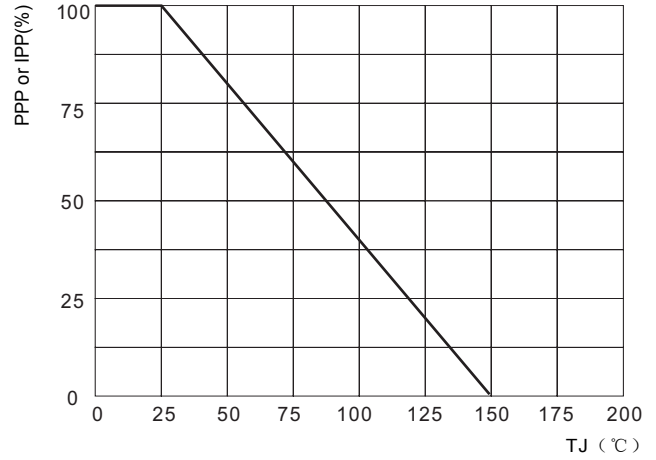


FIG3: Pulse Waveform

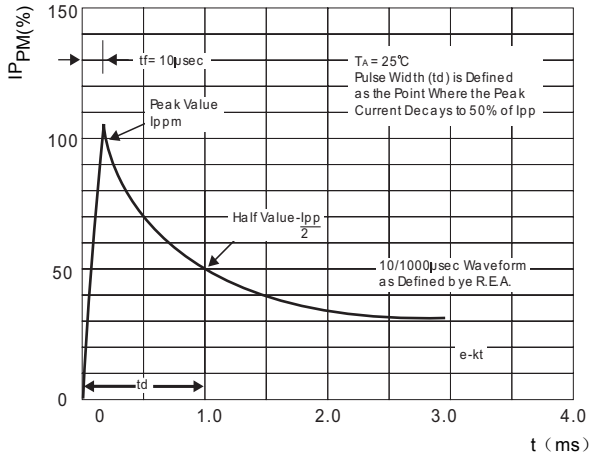


FIG4: Typical Transient Thermal Impedance

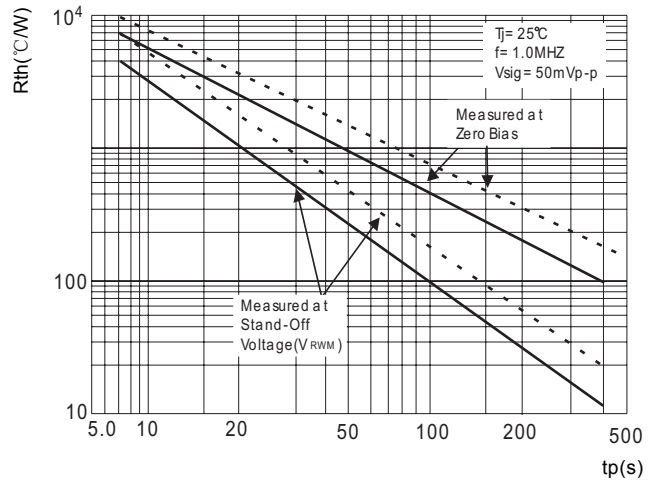


FIG5: Maximum Non-Repetitive Surge Current

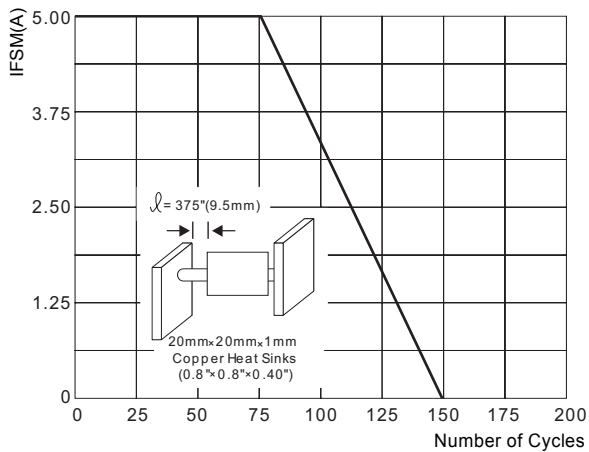
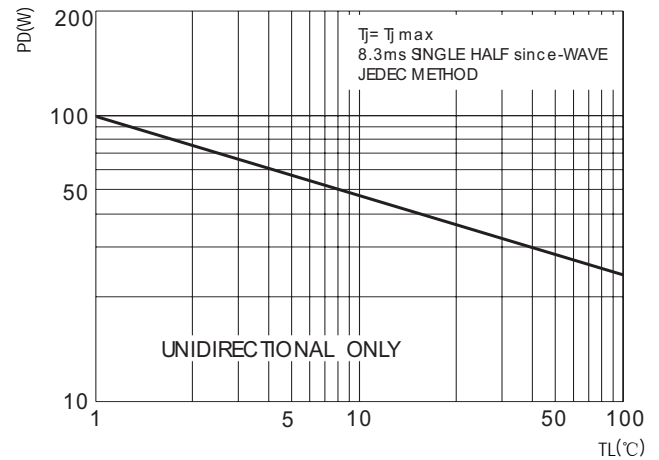
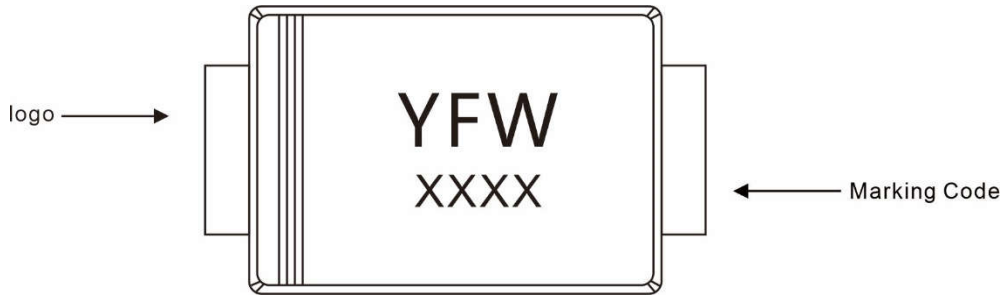


FIG6: Steady State Power Dissipation



Marking Diagram



Ordering information

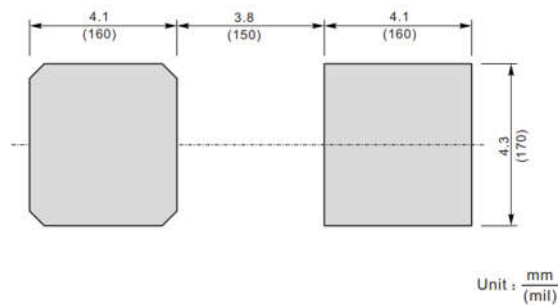
Package	Packing Description	Packing Quantity
DO-214AB SMC	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

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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