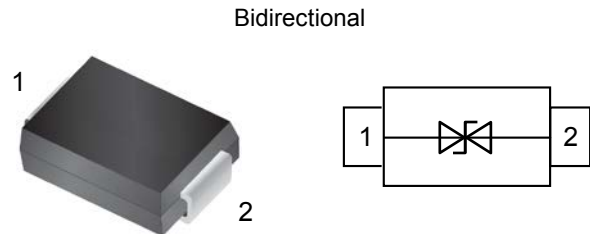


Power TVS in DO-214AB/SMC

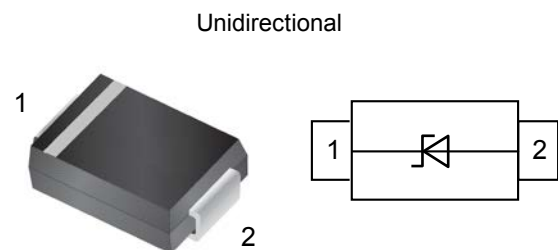
Features

- Glass passivated chip
- 8000W peak pulse power(10/1000us)
- High accuracy, 5% tolerance
- Uni and Bidirectional unit
- Low clamping voltage
- Low Leakage current
- Very fast response time



Mechanical Data

- **Case:** DO-214AB/SMC (plastic package).
RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals



Applications

- Computers
- Telecom system
- Industrial equipments
- Consumer electronic applications
- Other VCC bus and I/O interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak pulse power dissipation with a 10/1000us waveform ⁽¹⁾	P _{PP}	8000	W
Maximum peak reverse pulse current a 10/1000us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Peak forward surge current 8.3ms single half sine-wave ⁽²⁾	I _{FSM}	300	A
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150	°C

Notes:

1.Non-repetitive current pulse,per Fig.5 and detated above TA=25°C per Fig.1

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

Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

Part Number	Marking	Direction	Maximum Working Voltage V _{RWM} (V)	Maximum Reverse Current@V _{RWM} I _R max(μA)	Breakdown Voltage@I _T			Peak Surge Current I _{PP} (A)	Maximum Clamping Voltage@I _{PP} V _C (V)
					V _{BR} min(V)	V _{BR} max(V)	I _T (mA)		
8.0SMDJ12A	8PEP	Uni-Dir	12.0	800	13.3	14.70	1	402.1	19.9
8.0SMDJ12CA	8BEP	Bi-Dir	12.0	800	13.3	14.70	1	402.1	19.9
8.0SMDJ13A	8PEQ	Uni-Dir	13.0	500	14.4	15.90	1	372.1	21.5
8.0SMDJ13CA	8BEQ	Bi-Dir	13.0	500	14.4	15.90	1	372.1	21.5
8.0SMDJ14A	8PER	Uni-Dir	14.0	200	15.6	17.20	1	344.9	23.2
8.0SMDJ14CA	8BER	Bi-Dir	14.0	200	15.6	17.20	1	344.9	23.2
8.0SMDJ15A	8PES	Uni-Dir	15.0	100	16.7	18.50	1	327.9	24.4
8.0SMDJ15CA	8BES	Bi-Dir	15.0	100	16.7	18.50	1	327.9	24.4
8.0SMDJ16A	8PET	Uni-Dir	16.0	50	17.8	19.70	1	307.7	26.0
8.0SMDJ16CA	8BET	Bi-Dir	16.0	50	17.8	19.70	1	307.7	26.0
8.0SMDJ17A	8PEU	Uni-Dir	17.0	20	18.9	20.90	1	290.0	27.6
8.0SMDJ17CA	8BEU	Bi-Dir	17.0	20	18.9	20.90	1	290.0	27.6
8.0SMDJ18A	8PEV	Uni-Dir	18.0	10	20.0	22.10	1	274.0	29.2
8.0SMDJ18CA	8BEV	Bi-Dir	18.0	10	20.0	22.10	1	274.0	29.2
8.0SMDJ20A	8PEW	Uni-Dir	20.0	5	22.2	24.50	1	247.0	32.4
8.0SMDJ20CA	8BEW	Bi-Dir	20.0	5	22.2	24.50	1	247.0	32.4
8.0SMDJ22A	8PEX	Uni-Dir	22.0	5	24.4	26.90	1	225.4	35.5
8.0SMDJ22CA	8BEX	Bi-Dir	22.0	5	24.4	26.90	1	225.4	35.5
8.0SMDJ24A	8PEZ	Uni-Dir	24.0	5	26.7	29.50	1	205.7	38.9
8.0SMDJ24CA	8BEZ	Bi-Dir	24.0	5	26.7	29.50	1	205.7	38.9
8.0SMDJ26A	8PFE	Uni-Dir	26.0	5	28.9	31.90	1	190.1	42.1
8.0SMDJ26CA	8BFE	Bi-Dir	26.0	5	28.9	31.90	1	190.1	42.1
8.0SMDJ28A	8PFG	Uni-Dir	28.0	5	31.1	34.40	1	176.2	45.4
8.0SMDJ28CA	8BFG	Bi-Dir	28.0	5	31.1	34.40	1	176.2	45.4
8.0SMDJ30A	8PFK	Uni-Dir	30.0	5	33.3	36.80	1	165.3	48.4
8.0SMDJ30CA	8BFK	Bi-Dir	30.0	5	33.3	36.80	1	165.3	48.4
8.0SMDJ33A	8PFM	Uni-Dir	33.0	5	36.7	40.60	1	150.1	53.3
8.0SMDJ33CA	8BFM	Bi-Dir	33.0	5	36.7	40.60	1	150.1	53.3
8.0SMDJ36A	8PFP	Uni-Dir	36.0	5	40.0	44.20	1	137.8	58.1
8.0SMDJ36CA	8BFP	Bi-Dir	36.0	5	40.0	44.20	1	137.8	58.1
8.0SMDJ40A	8PFR	Uni-Dir	40.0	5	44.4	49.10	1	124.1	64.5
8.0SMDJ40CA	8BFR	Bi-Dir	40.0	5	44.4	49.10	1	124.1	64.5
8.0SMDJ43A	8PFT	Uni-Dir	43.0	5	47.8	52.80	1	115.3	69.4
8.0SMDJ43CA	8BFT	Bi-Dir	43.0	5	47.8	52.80	1	115.3	69.4

Part Number	Marking	Direction	Maximum Working Voltage V_{RWM} (V)	Maximum Reverse Current@ V_{RWM} I_R max(uA)	Breakdown Voltage@ I_T			Peak Surge Current I_{PP} (A)	Maximum Clamping Voltage@ I_{PP} V_C (V)
					V_{BR} min(V)	V_{BR} max(V)	I_T (mA)		
8.0SMDJ45A	8PFV	Uni-Dir	45.0	5	50.0	55.30	1	110.1	72.7
8.0SMDJ45CA	8BFV	Bi-Dir	45.0	5	50.0	55.30	1	110.1	72.7
8.0SMDJ48A	8PFX	Uni-Dir	48.0	5	53.3	58.90	1	103.4	77.4
8.0SMDJ48CA	8BFX	Bi-Dir	48.0	5	53.3	58.90	1	103.4	77.4
8.0SMDJ51A	8PFZ	Uni-Dir	51.0	5	56.7	62.70	1	97.1	82.4
8.0SMDJ51CA	8BFZ	Bi-Dir	51.0	5	56.7	62.70	1	97.1	82.4
8.0SMDJ54A	8PGE	Uni-Dir	54.0	5	60.0	66.30	1	92.0	87.1
8.0SMDJ54CA	8BGE	Bi-Dir	54.0	5	60.0	66.30	1	92.0	87.1
8.0SMDJ58A	8PGG	Uni-Dir	58.0	5	64.4	71.20	1	85.5	93.6
8.0SMDJ58CA	8BGG	Bi-Dir	58.0	5	64.4	71.20	1	85.5	93.6
8.0SMDJ60A	8PGK	Uni-Dir	60.0	5	66.7	73.70	1	82.7	96.8
8.0SMDJ60CA	8BGK	Bi-Dir	60.0	5	66.7	73.70	1	82.7	96.8
8.0SMDJ64A	8PGM	Uni-Dir	64.0	5	71.1	78.60	1	77.7	103.0
8.0SMDJ64CA	8BGM	Bi-Dir	64.0	5	71.1	78.60	1	77.7	103.0
8.0SMDJ70A	8PGP	Uni-Dir	70.0	5	77.8	86.00	1	71.0	113.0
8.0SMDJ70CA	8BGB	Bi-Dir	70.0	5	77.8	86.00	1	71.0	113.0
8.0SMDJ75A	8PGR	Uni-Dir	75.0	5	83.3	92.10	1	66.2	121.0
8.0SMDJ75CA	8BGR	Bi-Dir	75.0	5	83.3	92.10	1	66.2	121.0
8.0SMDJ78A	8PGT	Uni-Dir	78.0	5	86.7	95.80	1	63.5	126.0
8.0SMDJ78CA	8BGT	Bi-Dir	78.0	5	86.7	95.80	1	63.5	126.0
8.0SMDJ85A	8PGV	Uni-Dir	85.0	5	94.4	104.00	1	58.4	137.0
8.0SMDJ85CA	8BGV	Bi-Dir	85.0	5	94.4	104.00	1	58.4	137.0
8.0SMDJ90A	8PGX	Uni-Dir	90.0	5	100.0	111.00	1	55.0	146.0
8.0SMDJ90CA	8BGX	Bi-Dir	90.0	5	100.0	111.00	1	55.0	146.0
8.0SMDJ100A	8PGZ	Uni-Dir	100.0	5	111.0	123.00	1	49.4	162.0
8.0SMDJ100CA	8BGZ	Bi-Dir	100.0	5	111.0	123.00	1	49.4	162.0
8.0SMDJ110A	8PHE	Uni-Dir	110.0	5	122.0	135.00	1	45.2	177.0
8.0SMDJ110CA	8BHE	Bi-Dir	110.0	5	122.0	135.00	1	45.2	177.0

Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Fig. 1 - Pulse Derating Curve

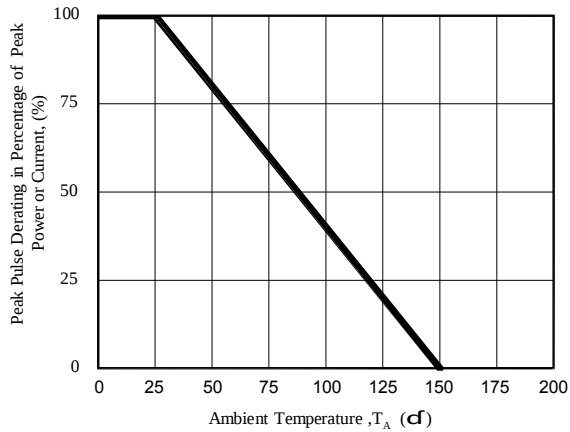


Fig. 2 - Maximum Non-Repetitive Surge Current

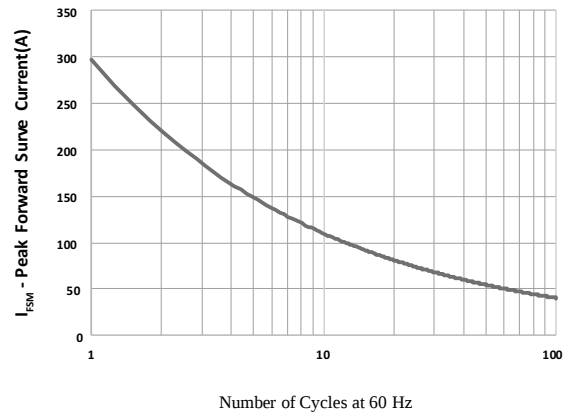


Fig. 3 - Steady State Power Derating Curve

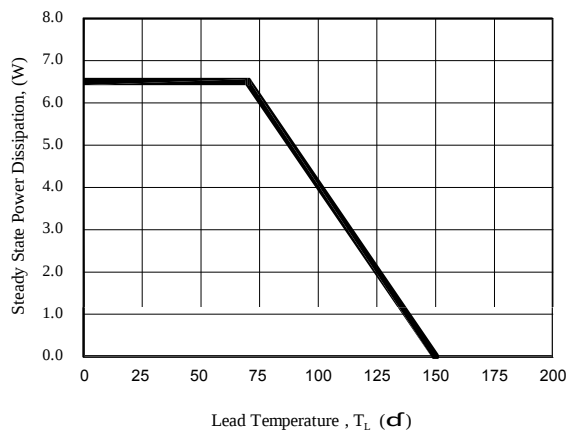


Fig. 4 - Peak Pulse Power Rating Curve

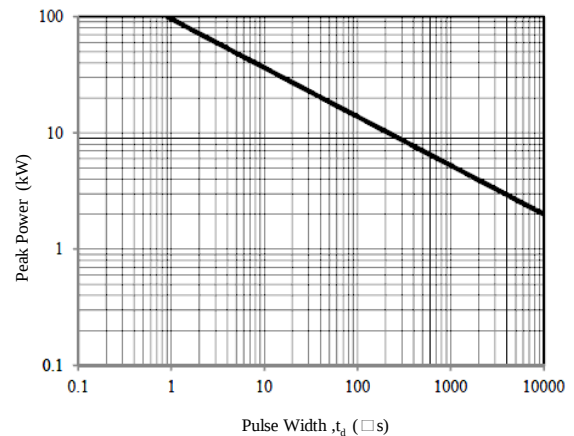


Fig. 5 - Pulse Waveform

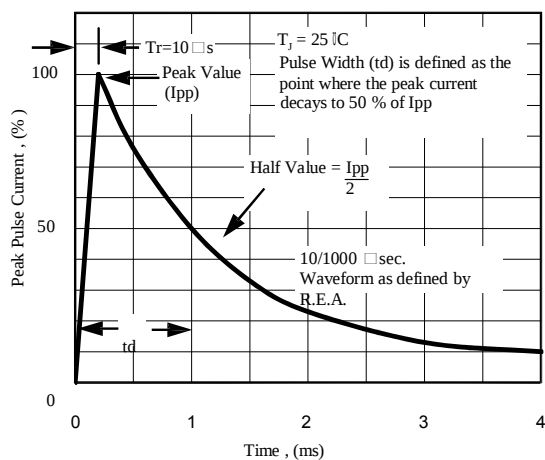
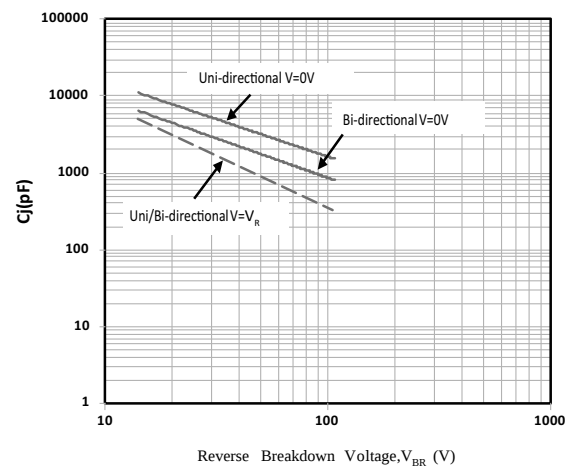
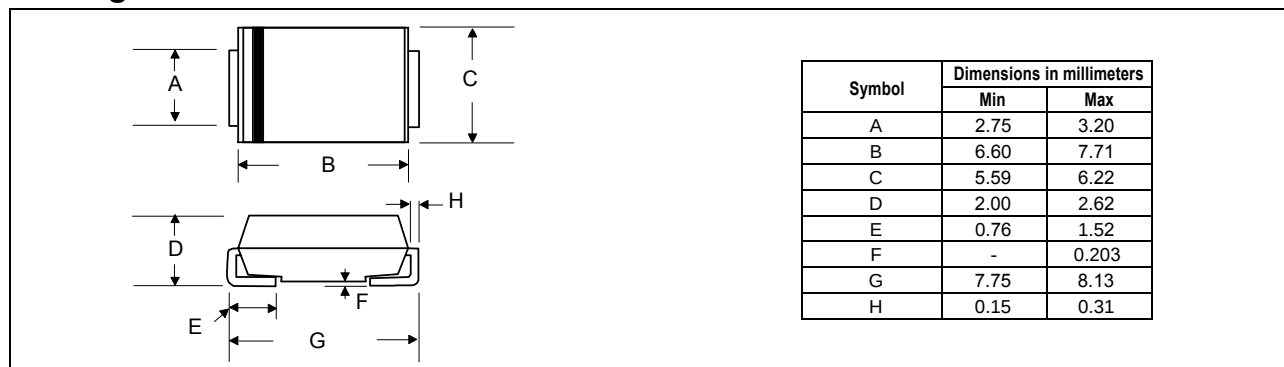


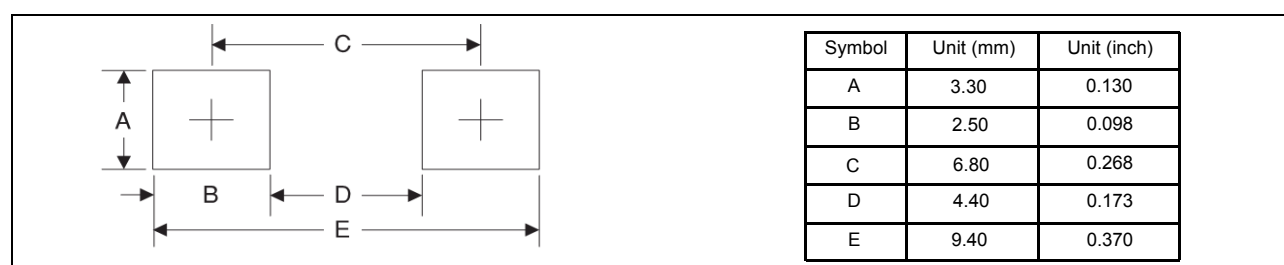
Fig. 6 - Typical Junction Capacitance



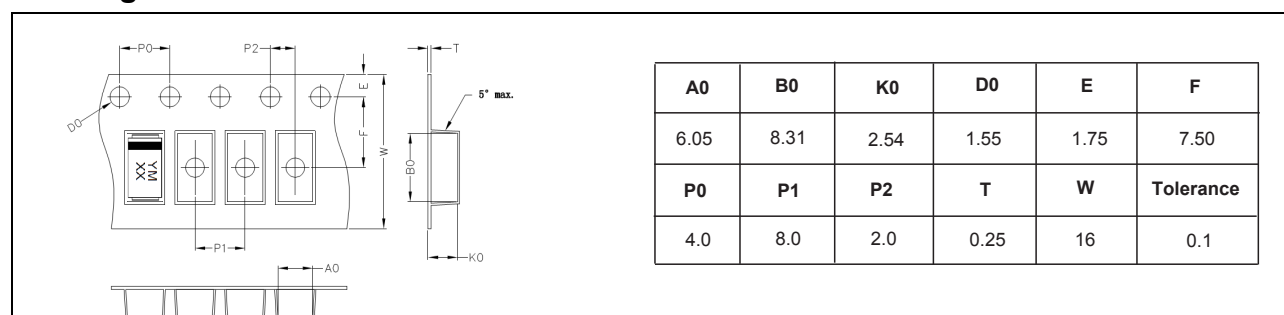
Package Dimensions



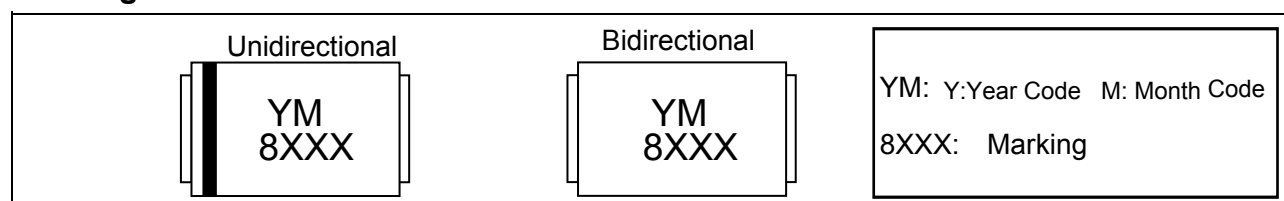
PAD Dimensions



Packing Information



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
8.0SMDJ Series	DO-214AB/SMC	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
19-Jun.-2024	5.0	Update

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