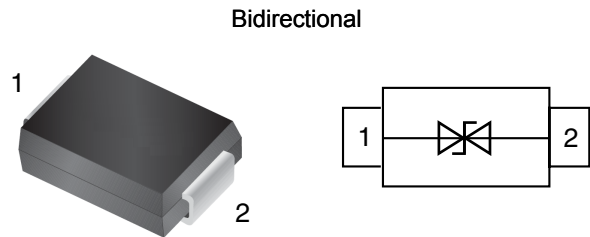


Power TVS in DO-214AB/SMC

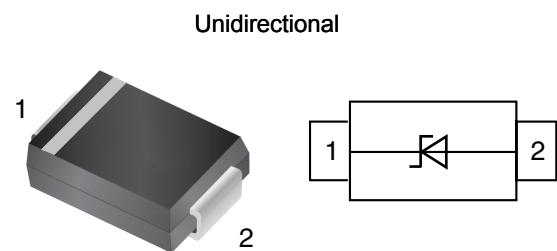
Features

- Glass passivated chip
- 3000W 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}	3000	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}	-55 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

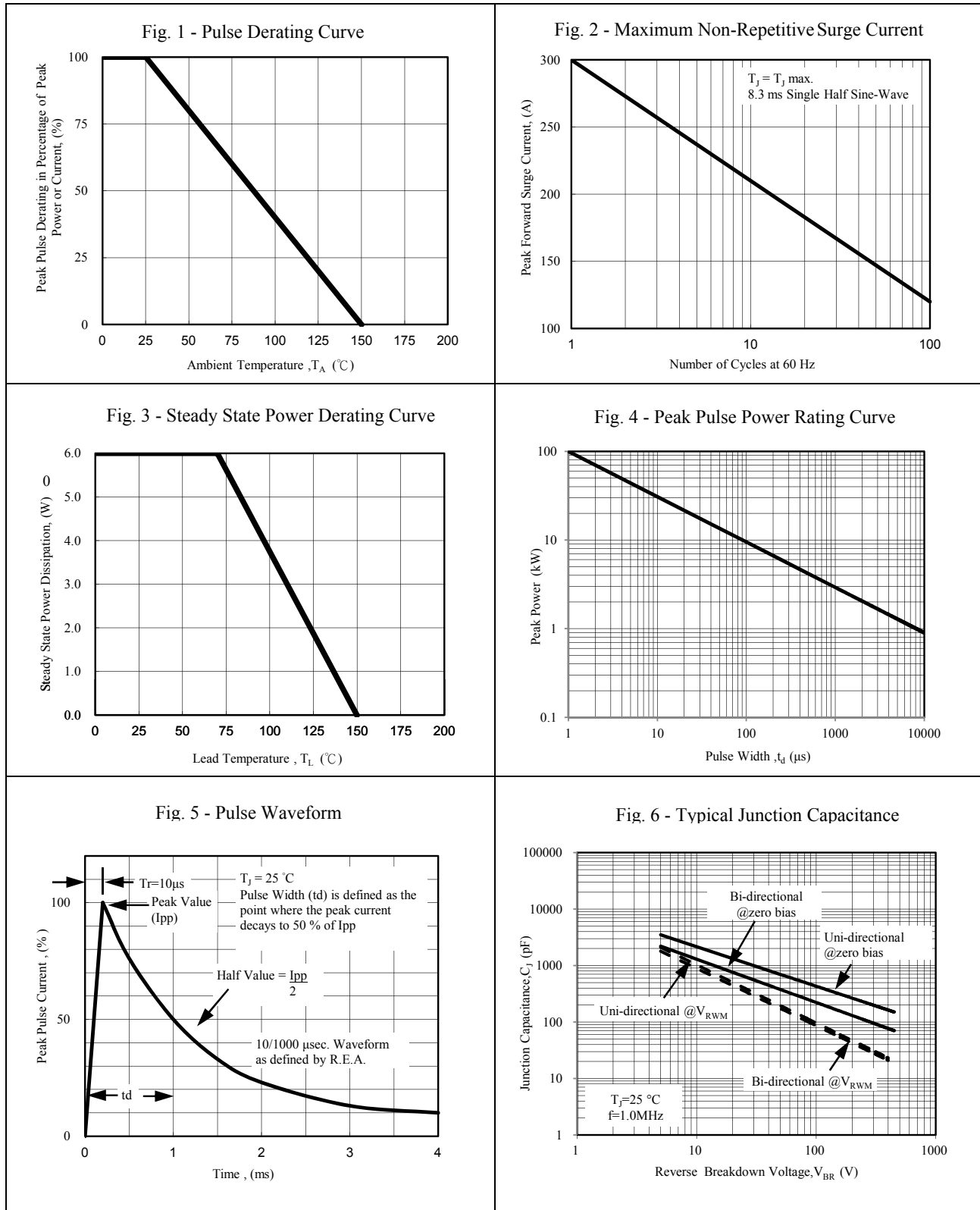
(T_A = 25 °C unless otherwise specified)

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)		
SMDJ5.0A	RDE	Uni-Dir	5.0	800	6.4	7.00	10	326.09	9.2
SMDJ5.0CA	DDE	Bi-Dir	5.0	800	6.4	7.00	10	326.09	9.2
SMDJ6.0A	RDG	Uni-Dir	6.0	800	6.7	7.37	10	291.26	10.3
SMDJ6.0CA	DDG	Bi-Dir	6.0	800	6.7	7.37	10	291.26	10.3
SMDJ6.5A	RDK	Uni-Dir	6.5	500	7.2	7.98	10	267.86	11.2
SMDJ6.5CA	DDK	Bi-Dir	6.5	500	7.2	7.98	10	267.86	11.2
SMDJ7.0A	PDM	Uni-Dir	7.0	200	7.8	8.60	10	250.00	12.0
SMDJ7.0CA	DDM	Bi-Dir	7.0	200	7.8	8.60	10	250.00	12.0
SMDJ7.5A	PDP	Uni-Dir	7.5	100	8.3	9.21	1	232.56	12.9
SMDJ7.5CA	DDP	Bi-Dir	7.5	100	8.3	9.21	1	232.56	12.9
SMDJ8.0A	PDR	Uni-Dir	8.0	50	8.9	9.83	1	220.59	13.6
SMDJ8.0CA	DDR	Bi-Dir	8.0	50	8.9	9.83	1	220.59	13.6
SMDJ8.5A	PDT	Uni-Dir	8.5	20	9.4	10.40	1	208.33	14.4
SMDJ8.5CA	DDT	Bi-Dir	8.5	20	9.4	10.40	1	208.33	14.4
SMDJ9.0A	PDV	Uni-Dir	9.0	10	10.0	11.10	1	194.81	15.4
SMDJ9.0CA	DDV	Bi-Dir	9.0	10	10.0	11.10	1	194.81	15.4
SMDJ10A	PDX	Uni-Dir	10.0	5	11.1	12.30	1	176.47	17.0
SMDJ10CA	DDX	Bi-Dir	10.0	5	11.1	12.30	1	176.47	17.0
SMDJ11A	PDZ	Uni-Dir	11.0	2	12.2	13.50	1	164.84	18.2
SMDJ11CA	DDZ	Bi-Dir	11.0	2	12.2	13.50	1	164.84	18.2
SMDJ12A	PEE	Uni-Dir	12.0	2	13.3	14.70	1	150.75	19.9
SMDJ12CA	DEE	Bi-Dir	12.0	2	13.3	14.70	1	150.75	19.9
SMDJ13A	PEG	Uni-Dir	13.0	2	14.4	15.90	1	139.53	21.5
SMDJ13CA	DEG	Bi-Dir	13.0	2	14.4	15.90	1	139.53	21.5
SMDJ14A	PEK	Uni-Dir	14.0	2	15.6	17.20	1	129.31	23.2
SMDJ14CA	DEK	Bi-Dir	14.0	2	15.6	17.20	1	129.31	23.2
SMDJ15A	PEM	Uni-Dir	15.0	2	16.7	18.50	1	122.95	24.4
SMDJ15CA	DEM	Bi-Dir	15.0	2	16.7	18.50	1	122.95	24.4
SMDJ16A	PEP	Uni-Dir	16.0	2	17.8	19.70	1	115.38	26.0
SMDJ16CA	DEP	Bi-Dir	16.0	2	17.8	19.70	1	115.38	26.0
SMDJ17A	PER	Uni-Dir	17.0	2	18.9	20.90	1	108.70	27.6
SMDJ17CA	DER	Bi-Dir	17.0	2	18.9	20.90	1	108.70	27.6
SMDJ18A	PET	Uni-Dir	18.0	2	20.0	22.10	1	102.74	29.2
SMDJ18CA	DET	Bi-Dir	18.0	2	20.0	22.10	1	102.74	29.2
SMDJ19A	PEW	Uni-Dir	19.0	2	21.1	23.30	1	97.47	30.8
SMDJ19CA	DEW	Bi-Dir	19.0	2	21.1	23.30	1	97.47	30.8
SMDJ20A	PEV	Uni-Dir	20.0	2	22.2	24.50	1	92.59	32.4
SMDJ20CA	DEV	Bi-Dir	20.0	2	22.2	24.50	1	92.59	32.4

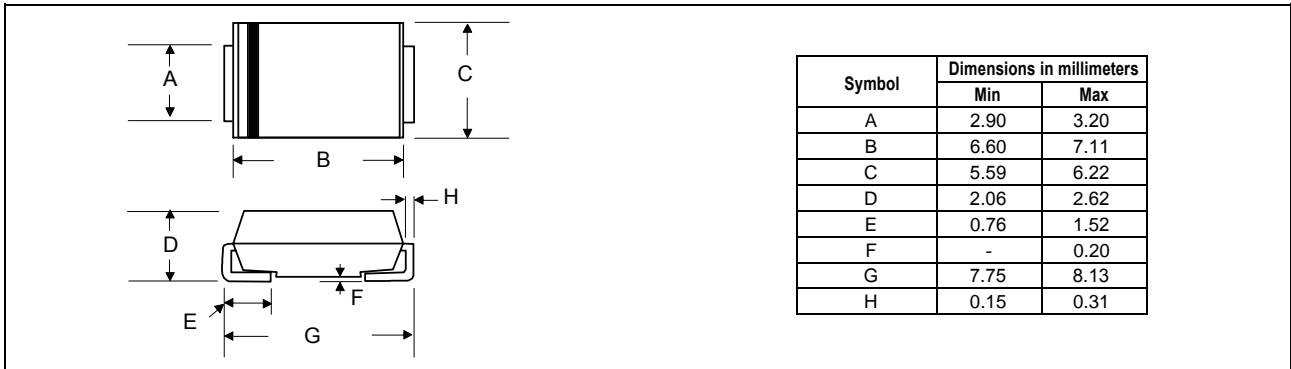
Part Number	Marking	Direction	Maximum Working Voltage V_{RWM} (V)	Maximum Reverse Current@ V_{RWM} I_R max(μ A)	Breakdown Voltage@ I_T			Peak Surge Current I_{PP} (A)	Maximum Clamping Voltage@ I_{PP} V_C (V)
					V_{BR} min(V)	V_{BR} max(V)	I_T (mA)		
SMDJ22A	PEX	Uni-Dir	22.0	2	24.4	26.90	1	84.51	35.5
SMDJ22CA	DEX	Bi-Dir	22.0	2	24.4	26.90	1	84.51	35.5
SMDJ24A	PEZ	Uni-Dir	24.0	2	26.7	29.50	1	77.12	38.9
SMDJ24CA	DEZ	Bi-Dir	24.0	2	26.7	29.50	1	77.12	38.9
SMDJ26A	PFE	Uni-Dir	26.0	2	28.9	31.90	1	71.26	42.1
SMDJ26CA	DFE	Bi-Dir	26.0	2	28.9	31.90	1	71.26	42.1
SMDJ28A	PFG	Uni-Dir	28.0	2	31.1	34.40	1	66.08	45.4
SMDJ28CA	DFG	Bi-Dir	28.0	2	31.1	34.40	1	66.08	45.4
SMDJ30A	PFK	Uni-Dir	30.0	2	33.3	36.80	1	61.98	48.4
SMDJ30CA	DFK	Bi-Dir	30.0	2	33.3	36.80	1	61.98	48.4
SMDJ33A	PFM	Uni-Dir	33.0	2	36.7	40.60	1	56.29	53.3
SMDJ33CA	DFM	Bi-Dir	33.0	2	36.7	40.60	1	56.29	53.3
SMDJ36A	PFM	Uni-Dir	36.0	2	40.0	44.20	1	51.64	58.1
SMDJ36CA	DFP	Bi-Dir	36.0	2	40.0	44.20	1	51.64	58.1
SMDJ40A	PFR	Uni-Dir	40.0	2	44.4	49.10	1	46.51	64.5
SMDJ40CA	DFR	Bi-Dir	40.0	2	44.4	49.10	1	46.51	64.5
SMDJ43A	PFT	Uni-Dir	43.0	2	47.8	52.80	1	43.23	69.4
SMDJ43CA	DFT	Bi-Dir	43.0	2	47.8	52.80	1	43.23	69.4
SMDJ45A	PFV	Uni-Dir	45.0	2	50.0	55.30	1	41.27	72.7
SMDJ45CA	DFV	Bi-Dir	45.0	2	50.0	55.30	1	41.27	72.7
SMDJ48A	PFX	Uni-Dir	48.0	2	53.3	58.90	1	38.76	77.4
SMDJ48CA	DFX	Bi-Dir	48.0	2	53.3	58.90	1	38.76	77.4
SMDJ51A	PFZ	Uni-Dir	51.0	2	56.7	62.70	1	36.41	82.4
SMDJ51CA	DFZ	Bi-Dir	51.0	2	56.7	62.70	1	36.41	82.4
SMDJ54A	RGE	Uni-Dir	54.0	2	60.0	66.30	1	34.44	87.1
SMDJ54CA	DGE	Bi-Dir	54.0	2	60.0	66.30	1	34.44	87.1
SMDJ58A	PGG	Uni-Dir	58.0	2	64.4	71.20	1	32.05	93.6
SMDJ58CA	DGG	Bi-Dir	58.0	2	64.4	71.20	1	32.05	93.6
SMDJ60A	PGK	Uni-Dir	60.0	2	66.7	73.70	1	30.99	96.8
SMDJ60CA	DGK	Bi-Dir	60.0	2	66.7	73.70	1	30.99	96.8
SMDJ64A	PGM	Uni-Dir	64.0	2	71.1	78.60	1	29.13	103.0
SMDJ64CA	DGM	Bi-Dir	64.0	2	71.1	78.60	1	29.13	103.0
SMDJ70A	PGP	Uni-Dir	70.0	2	77.8	86.00	1	26.55	113.0
SMDJ70CA	DGP	Bi-Dir	70.0	2	77.8	86.00	1	26.55	113.0
SMDJ75A	PGR	Uni-Dir	75.0	2	83.3	92.10	1	24.79	121.0
SMDJ75CA	DGR	Bi-Dir	75.0	2	83.3	92.10	1	24.79	121.0
SMDJ78A	PGT	Uni-Dir	78.0	2	86.7	95.80	1	23.81	126.0
SMDJ78CA	DGT	Bi-Dir	78.0	2	86.7	95.80	1	23.81	126.0

Part Number	Marking	Direction	Maximum Working Voltage V_{RWM} (V)	Maximum Reverse Current@ V_{RWM} I_R max(μ A)	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)		
SMDJ80A	PGW	Uni-Dir	80.0	2	88.8	97.60	1	23.15	129.6
SMDJ80CA	DGW	Bi-Dir	80.0	2	88.8	97.60	1	23.15	129.6
SMDJ85A	PGV	Uni-Dir	85.0	2	94.4	104.00	1	21.90	137.0
SMDJ85CA	DGV	Bi-Dir	85.0	2	94.4	104.00	1	21.90	137.0
SMDJ90A	PGX	Uni-Dir	90.0	2	100.0	111.00	1	20.55	146.0
SMDJ90CA	DGX	Bi-Dir	90.0	2	100.0	111.00	1	20.55	146.0
SMDJ100A	PGZ	Uni-Dir	100.0	2	111.0	123.00	1	18.52	162.0
SMDJ100CA	DGZ	Bi-Dir	100.0	2	111.0	123.00	1	18.52	162.0
SMDJ110A	PHE	Uni-Dir	110.0	2	122.0	135.00	1	16.95	177.0
SMDJ110CA	DHE	Bi-Dir	110.0	2	122.0	135.00	1	16.95	177.0
SMDJ120A	PHG	Uni-Dir	120.0	2	133.0	147.00	1	15.54	193.0
SMDJ120CA	DHG	Bi-Dir	120.0	2	133.0	147.00	1	15.54	193.0
SMDJ130A	PHK	Uni-Dir	130.0	2	144.0	159.00	1	14.35	209.0
SMDJ130CA	DHK	Bi-Dir	130.0	2	144.0	159.00	1	14.35	209.0
SMDJ140A	PHW	Uni-Dir	140.0	2	155.0	171.00	1	13.23	226.8
SMDJ140CA	DHW	Bi-Dir	140.0	2	155.0	171.00	1	13.23	226.8
SMDJ150A	PHM	Uni-Dir	150.0	2	167.0	185.00	1	12.35	243.0
SMDJ150CA	DHM	Bi-Dir	150.0	2	167.0	185.00	1	12.35	243.0
SMDJ160A	PHP	Uni-Dir	160.0	2	178.0	197.00	1	11.58	259.0
SMDJ160CA	DHP	Bi-Dir	160.0	2	178.0	197.00	1	11.58	259.0
SMDJ170A	PHR	Uni-Dir	170.0	2	189.0	209.00	1	10.91	275.0
SMDJ170CA	DHR	Bi-Dir	170.0	2	189.0	209.00	1	10.91	275.0
SMDJ180A	PHT	Uni-Dir	180.0	2	200.0	220.00	1	10.29	291.6
SMDJ180CA	DHT	Bi-Dir	180.0	2	200.0	220.00	1	10.29	291.6
SMDJ190A	PHX	Uni-Dir	190.0	2	211.0	232.00	1	9.75	307.8
SMDJ190CA	DHX	Bi-Dir	190.0	2	211.0	232.00	1	9.75	307.8
SMDJ200A	PHZ	Uni-Dir	200.0	2	224.0	247.00	1	9.26	324.0
SMDJ200CA	DHZ	Bi-Dir	200.0	2	224.0	247.00	1	9.26	324.0
SMDJ220A	PKE	Uni-Dir	220.0	2	246.0	272.00	1	8.43	356.0
SMDJ220CA	DKE	Bi-Dir	220.0	2	246.0	272.00	1	8.43	356.0
SMDJ250A	PKG	Uni-Dir	250.0	2	279.0	309.00	1	7.41	405.0
SMDJ250CA	DKG	Bi-Dir	250.0	2	279.0	309.00	1	7.41	405.0
SMDJ300A	PKM	Uni-Dir	300.0	2	335.0	371.00	1	6.17	486.0
SMDJ300CA	DKM	Bi-Dir	300.0	2	335.0	371.00	1	6.17	486.0
SMDJ350A	PKP	Uni-Dir	350.0	2	391.0	432.00	1	5.29	567.0
SMDJ350CA	DKP	Bi-Dir	350.0	2	391.0	432.00	1	5.29	567.0
SMDJ400A	PKZ	Uni-Dir	400.0	2	447.0	494.00	1	4.63	648.0
SMDJ400CA	DKZ	Bi-Dir	400.0	2	447.0	494.00	1	4.63	648.0
SMDJ440A	PPE	Uni-Dir	440.0	2	492.0	543.00	1	4.21	713.0
SMDJ440CA	DPE	Bi-Dir	440.0	2	492.0	543.00	1	4.21	713.0

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



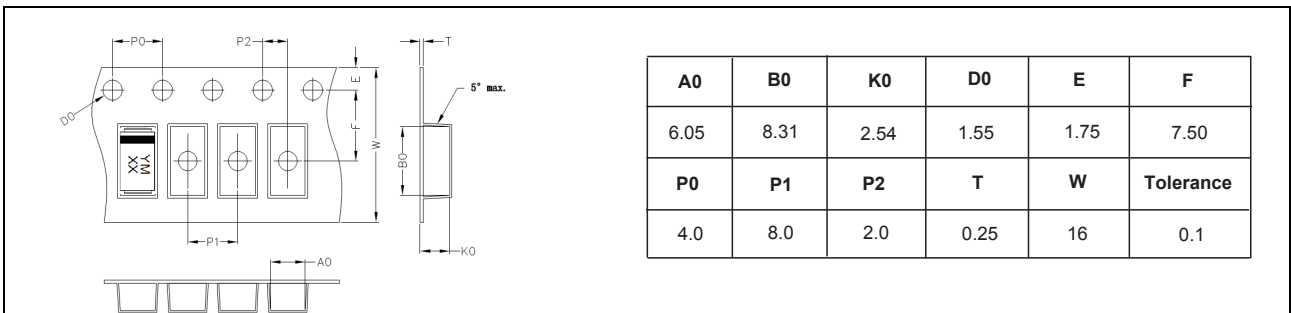
Package Dimensions



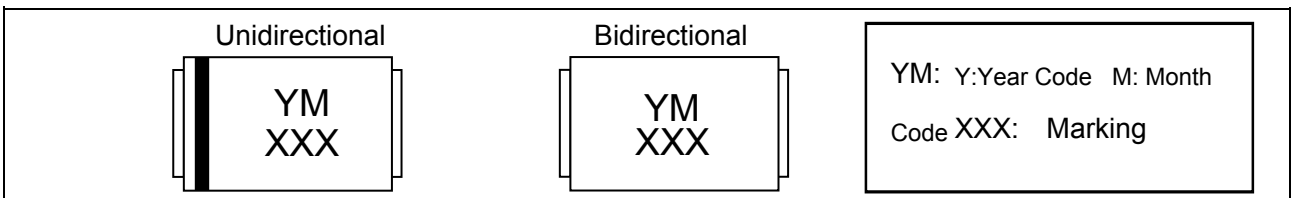
PAD Dimensions



Packing Information



Marking



Ordering information

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

Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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