

SA5.0A THRU SA180CA

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

Breakdown Voltage: 5.0-180Volts Peak Pulse Power: 500 Watts

FEATURES

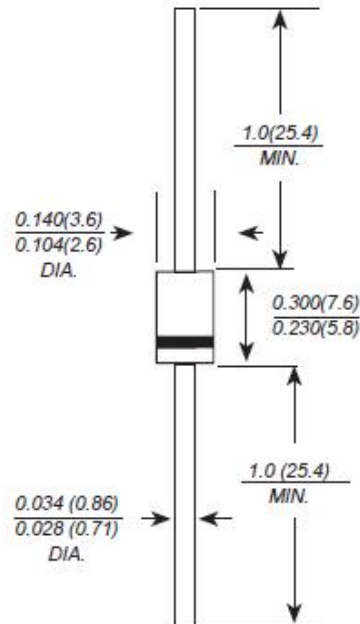
- ◆ 500w peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time: typically less than 1.0ps from 0v to V_{BR} for unidirectional and 5.0ns for bidirectional types

◆ High temperature soldering guaranteed:
265°C/10S/9.5mm lead length at 5 lbs tension

Mechanical Data

- ◆ Case: JEDEC DO-15 molded plastic body over passivated junction
- ◆ Terminals: Plated axial leads, solderable per MIL-STD 750, method 2026
- ◆ Polarity: Color band denotes cathode except for bidirectional types
- ◆ Mounting Position: Any
- ◆ Weight: 0.014 ounce, 0.40 grams

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation (Note 1)	P_{PPM}	Minimum 500	Watts
Peak pulse reverse current (Note 1, Fig.3)	I_{PPM}	See Table 1	Amps
Steady state power dissipation (Note 2)	$P_{M(AV)}$	1.6	Watts
Peak forward surge current (Note 3)	I_{FSM}	70	Amps
Maximum instantaneous forward voltage at 35A for unidirectional only (Note 3)	V_F	3.5	Volts
Operating junction and storage temperature range	T_J, T_{STG}	-55 to + 175	°C

Note: 1. 10/1000ms waveform non-repetitive current pulse, per Fig.3 and derated above $T_a=25^\circ\text{C}$ per Fig.2

2. $T_L=75^\circ\text{C}$, lead lengths 9.5mm, Mounted on copper pad area of (40x40mm) Fig.5

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

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ELECTRICAL CHARACTERISTICS (at T_A=25°C unless otherwise noted)

Part Number		Reverse Stand off Voltage VR	Breakdown Voltage VBR (Volts) @ IT		Test Current IT	Maximum Clamping Voltage VC @ Ipp	Maximum Peak Pulse Current Ipp	Maximum Reverse Leakage IR@ VR
(Uni)	(Bi)	(Volts)	MIN	A	(mA)	(V)	(A)	(µA)
SA5.0A	SA5.0CA	5.0	6.40	7.00	10	9.2	55.4	600
SA6.0A	SA6.0CA	6.0	6.67	7.37	10	10.3	49.5	600
SA6.5A	SA6.5CA	6.5	7.22	7.98	10	11.2	45.5	400
SA7.0A	SA7.0CA	7.0	7.78	8.60	10	12.0	42.5	150
SA7.5A	SA7.5CA	7.5	8.33	9.21	1	12.9	39.5	50
SA8.0A	SA8.0CA	8.0	8.89	9.83	1	13.6	37.5	25
SA8.5A	SA8.5CA	8.5	9.44	10.40	1	14.4	35.4	10
SA9.0A	SA9.0CA	9.0	10.00	11.10	1	15.4	33.1	5
SA10A	SA10CA	10.0	11.10	12.30	1	17.0	30.0	3
SA11A	SA11CA	11.0	12.20	13.50	1	18.2	28.0	1
SA12A	SA12CA	12.0	13.30	14.70	1	19.9	25.6	1
SA13A	SA13CA	13.0	14.40	15.90	1	21.5	23.7	1
SA14A	SA14CA	14.0	15.60	17.20	1	23.2	22.0	1
SA15A	SA15CA	15.0	16.70	18.50	1	24.4	20.9	1
SA16A	SA16CA	16.0	17.80	19.70	1	26.0	19.6	1
SA17A	SA17CA	17.0	18.90	20.90	1	27.6	18.5	1
SA18A	SA18CA	18.0	20.00	22.10	1	29.2	17.5	1
SA20A	SA20CA	20.0	22.20	24.50	1	32.4	15.7	1
SA22A	SA22CA	22.0	24.40	26.90	1	35.5	14.4	1
SA24A	SA24CA	24.0	26.70	29.50	1	38.9	13.1	1
SA26A	SA26CA	26.0	28.90	31.90	1	42.1	12.1	1
SA28A	SA28CA	28.0	31.10	34.40	1	45.4	11.2	1
SA30A	SA30CA	30.0	33.30	36.80	1	48.4	10.5	1
SA33A	SA33CA	33.0	36.70	40.60	1	53.3	9.6	1
SA36A	SA36CA	36.0	40.00	44.20	1	58.1	8.8	1
SA40A	SA40CA	40.0	44.40	49.10	1	64.5	7.9	1
SA43A	SA43CA	43.0	47.80	52.80	1	69.4	7.3	1
SA45A	SA45CA	45.0	50.00	55.30	1	72.7	7.0	1
SA48A	SA48CA	48.0	53.30	58.90	1	77.4	6.6	1
SA51A	SA51CA	51.0	56.70	62.70	1	82.4	6.2	1
SA54A	SA54CA	54.0	60.00	66.30	1	87.1	5.9	1
SA58A	SA58CA	58.0	64.40	71.20	1	93.6	5.4	1
SA60A	SA60CA	60.0	66.70	73.70	1	96.8	5.3	1
SA64A	SA64CA	64.0	71.10	78.60	1	103.0	5.0	1
SA70A	SA70CA	70.0	77.80	86.00	1	113.0	4.5	1
SA75A	SA75CA	75.0	83.30	92.10	1	121.0	4.2	1
SA78A	SA78CA	78.0	86.70	95.80	1	126.0	4.0	1
SA85A	SA85CA	85.0	94.40	104.00	1	137.0	3.7	1
SA90A	SA90CA	90.0	100.00	111.00	1	146.0	3.5	1
SA100A	SA100CA	100.0	111.00	123.00	1	162.0	3.1	1
SA110A	SA110CA	110.0	122.00	135.00	1	177.0	2.9	1
SA120A	SA120CA	120.0	133.00	147.00	1	193.0	2.6	1
SA130A	SA130CA	130.0	144.00	159.00	1	209.0	2.4	1
SA150A	SA150CA	150.0	167.00	185.00	1	243.0	2.1	1
SA160A	SA160CA	160.0	178.00	197.00	1	259.0	2.0	1
SA170A	SA170CA	170.0	189.00	209.00	1	275.0	1.9	1
SA180A	SA180CA	180.0	200.00	233.00	1	289.0	1.7	1

For bidirectional type having V_R of 10 volts and less, the I_R limit is double.For parts without A, the V_{BR} is ± 10%.

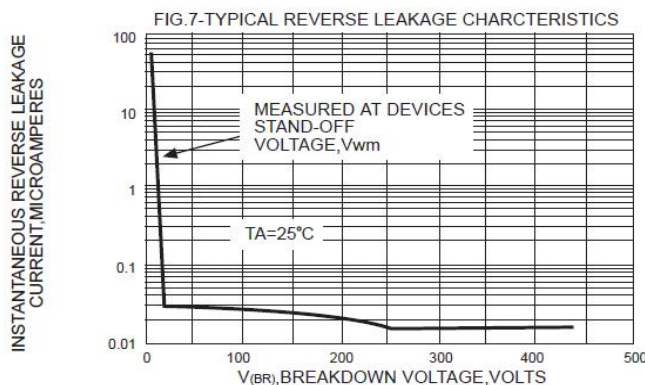
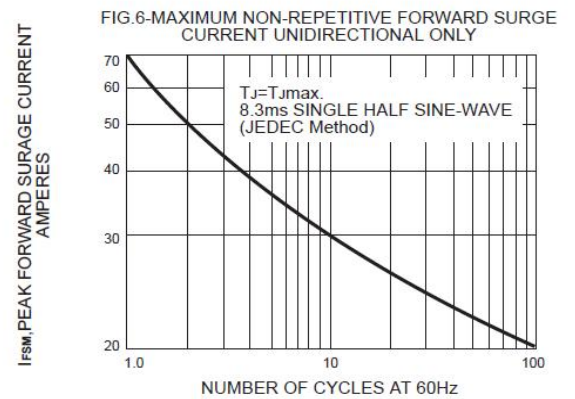
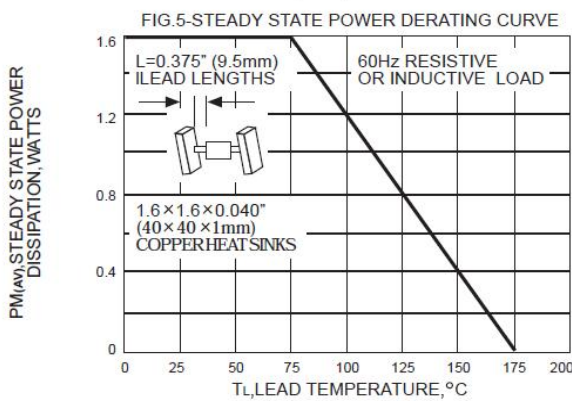
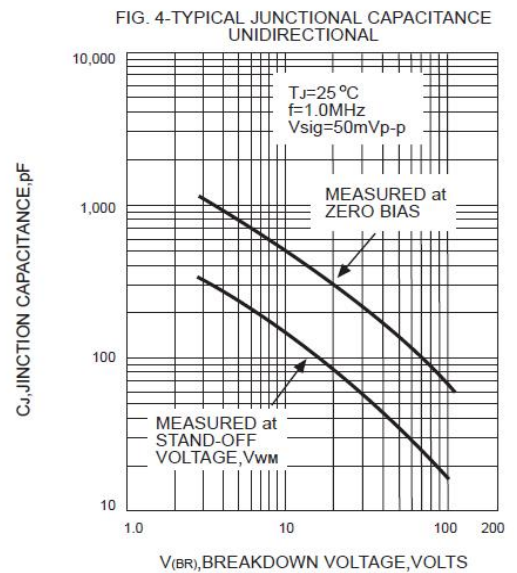
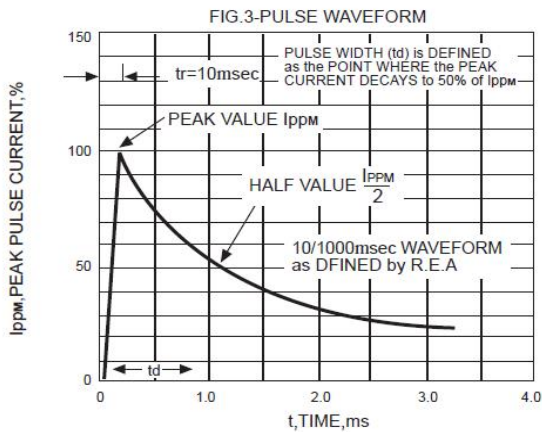
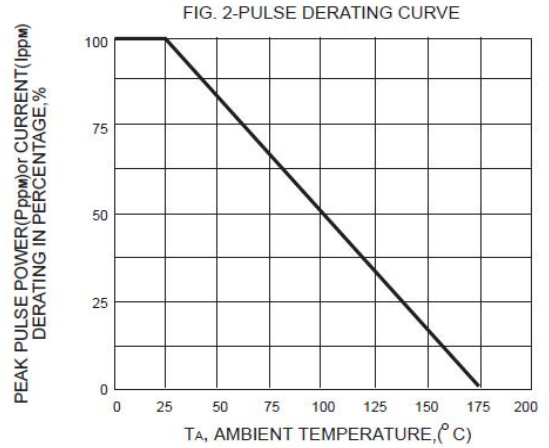
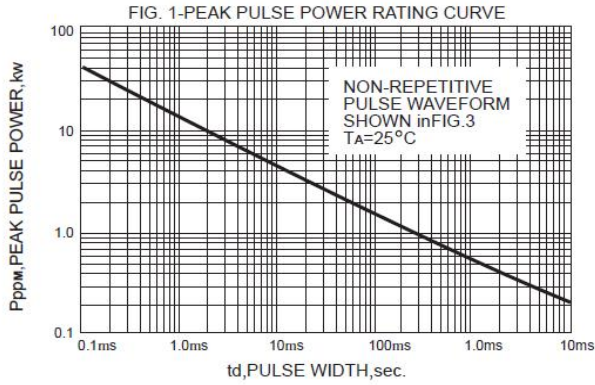
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RATING AND CHARACTERISTIC CURVES SA5.0A THRU SA180CA



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