



Solid State Devices, Inc.

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STA3KA13.6JE thru STA3KA800JE

3,000 WATT PEAK PULSE POWER UNIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR 13.6 – 800 VOLTS

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

STA3K

Screening^{2/} = Not Screened
 TX = TX Level
 TXV = TXV Level

Package
 JE = TO-257JE

Voltage
 13.6 – 800 Volts

Voltage Tolerance^{3/}
 A = 10%
 B = 5%

FEATURES:

- 13.6 – 800 volts unidirectional in TO-257 package
- Glass passivated junction, epoxy encapsulated assembly
- Meets all environmental requirements of MIL-PRF-19500
- Custom configuration available
- Reverse polarity available (add suffix "R")
- 150°C maximum operating temperature
- TX and TXV level screening available

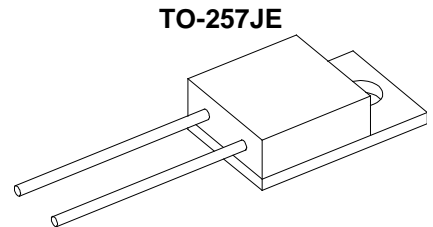
APPLICATIONS:

- Voltage sensitive components protection
- Protection against power interruption
- Lightning protection

MAXIMUM RATINGS	Symbol	Value	Units
Stand Off Voltage	V_{RWM}	13.6 - 800	Volts
Steady State Power Dissipation	P_D	10	Watts
Peak Pulse Power @ 1.0 msec	P_{PP}	3000	Watts
Peak Surge Current (8.3 ms pulse, half sine wave)	I_{FSM}	200	Amps
Operating and Storage Temperature	T_{op} & T_{stg}	-65 to +150	°C

NOTES:

- 1/ For ordering information, price, and availability – contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ SSDI's Transient Voltage Suppressors offer standard breakdown voltage tolerances of ±10% (A) and ±5% (B). For other voltages and voltage tolerances, contact SSDI's Marketing Department.



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: TVS001D

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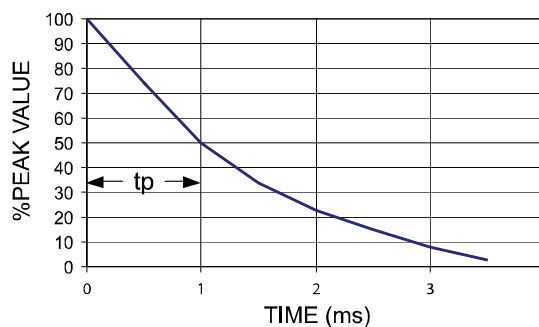
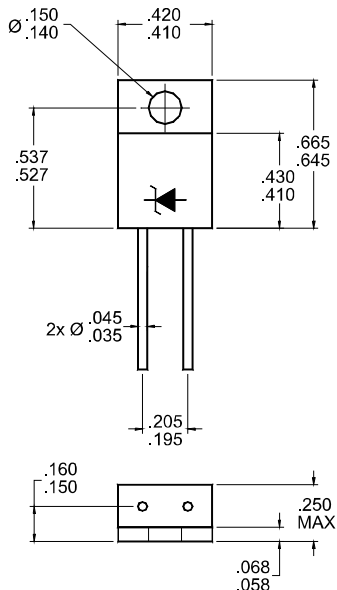
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ELECTRICAL CHARACTERISTICS

PART NUMBER ^{3/}		BREAKDOWN ^{4/}		MAX REVERSE STAND OFF			PEAK PULSE CLAMPING		MAXIMUM TEMPERATURE COEFFICIENT
		Nominal Voltage	Test Current	Voltage		Reverse Leakage Current	@ Current tp = 1ms ^{5/}	Voltage (max)	TC @ 25°C & 125°C
		V _{BR}	I _{BRT}	V _{RWM}		I _R @V _{RWM}	I _{PP}	V _C	
10%	5%	Volts	mA	10%	5%	µA	A	Volts	%/°C
STA3KA13.6JE	STA3KB13.6JE	13.6	10	11.00	10.60	1000	143	21.0	0.057
STA3KA15JE	STA3KB15JE	15	10	12.10	12.80	500	132	22.6	0.061
STA3KA16.4JE	STA3KB16.4JE	16.4	10	13.26	14.04	200	124	24.2	0.065
STA3KA18.2JE	STA3KB18.2JE	18.2	1.0	14.74	15.56	50	112	26.8	0.068
STA3KA20JE	STA3KB20JE	20	1.0	16.2	17.1	10	103	29.0	0.073
STA3KA22JE	STA3KB22JE	22	1.0	17.84	18.8	5.0	96.0	31.2	0.075
STA3KA24JE	STA3KB24JE	24	1.0	19.44	20.4	5.0	90.0	33.4	0.076
STA3KA26JE	STA3KB26JE	26	1.0	21.0	22.2	5.0	82.0	36.4	0.081
STA3KA30JE	STA3KB30JE	30	1.0	24.2	25.6	5.0	71.0	42.4	0.084
STA3KA32JE	STA3KB32JE	32	1.0	25.8	27.2	5.0	67.0	45.0	0.086
STA3KA36JE	STA3KB36JE	36	1.0	29.0	30.6	5.0	57.2	52.4	0.088
STA3KA40JE	STA3KB40JE	40	1.0	32.4	34.2	5.0	54.0	55.4	0.090
STA3KA44JE	STA3KB44JE	44	1.0	35.6	37.6	5.0	49.0	61.2	0.092
STA3KA48JE	STA3KB48JE	48	1.0	38.8	41.0	5.0	45.0	66.4	0.094
STA3KA60JE	STA3KB60JE	60	1.0	48.6	50.2	5.0	36.0	82.8	0.097
STA3KA72JE	STA3KB72JE	72	1.0	59.2	61.6	5.0	30.0	98.8	0.099
STA3KA86JE	STA3KB86JE	86	1.0	69.2	73.6	5.0	25.3	118.6	0.101
STA3KA102JE	STA3KB102JE	102	1.0	82.6	87.2	5.0	21.4	140.2	0.102
STA3KA124JE	STA3KB124JE	124	1.0	100.4	106.0	5.0	17.7	170.0	0.104
STA3KA150JE	STA3KB150JE	150	1.0	120.4	128.2	5.0	14.6	206.0	0.105
STA3KA164JE	STA3KB164JE	164	1.0	132.8	140.2	5.0	13.3	226	0.105
STA3KA200JE	STA3KB200JE	200	1.0	162	171	5.0	11.0	274	0.106
STA3KA300JE	STA3KB300JE	300	1.0	242	256	5.0	7.2	414	0.108
STA3KA360JE	STA3KB360JE	360	1.0	292	308	5.0	6.1	492	0.108
STA3KA400JE	STA3KB400JE	400	1.0	324	342	5.0	5.5	548	0.108
STA3KA600JE	STA3KB600JE	600	1.0	486	512	5.0	3.6	828	0.110
STA3KA800JE	STA3KB800JE	800	1.0	648	684	5.0	2.7	1096	0.110

CASE OUTLINE: TO-257JE



NOTES:

- 3/ SSDI's Transient Voltage Suppressors offer standard breakdown voltage tolerances of ±10% (A) and ±5% (B). For other voltages and voltage tolerances, contact SSDI's Marketing Department.
- 4/ All voltages are measured with automated test set using 35 msec test time. Longer or shorter test times will have a corresponding effect on the measured value due to the heating effects.
- 5/ Pulse width (tp) is defined as the time from peak pulse current I_{PP} to the point where peak pulse current decayed to 50% of rated I_{PP} (10µsec x 100µsec wave form as defined by R.E.A.).

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