

© COPYRIGHT 1997 BY SPC TECHNOLOGY. ALL RIGHTS RESERVED. NO PORTION OF THIS PUBLICATION, WHETHER IN WHOLE OR IN PART CAN BE REPRODUCED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPC TECHNOLOGY.

REVISIONS				DOC. NO. SPC-F004, Total Pages: 2 Effective: 7/15/97. DCP No: 229 Supersedes DCP No: 103				
DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
139	A	RELEASED	J.W.M.	7/23/97	J.C.	7/23/97	B.B.	7/23/97

Part No.	Reverse Stand-Off Voltage VRWM (V)	Breakdown Voltage VBR (V) Min @ IT	Breakdown Voltage VBR (V) Max @ IT	Test Current IT (mA)	Maximum Clamping Voltage @ Ipp Vc (V)	Peak Pulse Current Ipp (A)	Reverse Leakage @ VRWM IR (uA)
1.5KE10A	8.55	9.50	10.50	1	14.5	103.0	10.0
1.5KE10C	8.10	9.00	11.00	1	15.0	100.0	20.0
1.5KE12A	10.20	11.40	12.60	1	16.7	90.0	5.0
1.5KE12C	9.72	10.80	13.20	1	17.3	87.0	5.0
1.5KE15A	12.80	14.30	15.80	1	21.2	71.0	5.0
1.5KE15C	12.10	13.50	16.50	1	22.0	68.0	5.0
1.5KE16A	13.60	15.20	16.80	1	22.5	67.0	5.0
1.5KE16C	12.90	14.40	17.60	1	23.5	64.0	5.0
1.5KE18C	14.50	16.20	19.80	1	26.5	56.5	5.0
1.5KE20A	17.10	19.00	21.00	1	27.7	54.0	5.0
1.5KE20C	16.20	18.00	22.00	1	29.1	51.5	5.0
1.5KE22A	18.80	20.90	23.10	1	30.6	49.0	5.0
1.5KE22C	17.80	19.80	24.20	1	31.9	47.0	5.0
1.5KE30A	25.60	28.50	31.50	1	41.4	36.0	5.0
1.5KE30C	24.30	27.00	33.00	1	43.5	34.5	5.0
1.5KE36A	30.80	34.20	37.80	1	49.9	30.0	5.0
1.5KE36C	29.10	32.40	39.60	1	52.0	29.0	5.0
1.5KE36CA	30.80	34.20	37.80	1	49.9	30.0	5.0
1.5KE39A	33.30	37.10	41.00	1	53.9	28.0	5.0
1.5KE39C	31.60	35.10	42.90	1	56.4	26.5	5.0
1.5KE51A	43.60	48.50	53.60	1	70.1	21.4	5.0
1.5KE51C	41.30	45.90	56.10	1	73.5	20.4	5.0
1.5KE51CA	43.60	48.50	53.60	1	70.1	21.4	5.0
1.5KE68A	58.10	64.60	71.40	1	92.0	16.3	5.0
1.5KE68C	55.10	61.20	74.80	1	98.0	15.3	5.0
1.5KE75A	64.10	71.30	78.80	1	103.0	14.6	5.0
1.5KE75C	60.70	67.50	82.50	1	108.0	13.9	5.0
1.5KE82A	70.10	77.90	86.10	1	113.0	13.3	5.0
1.5KE82C	66.40	73.80	90.20	1	118.0	12.7	5.0
1.5KE82CA	70.10	77.90	86.10	1	113.0	13.3	5.0
1.5KE91A	77.80	86.50	95.50	1	125.0	12.0	5.0
1.5KE91C	73.70	81.90	100.00	1	131.0	11.4	5.0
1.5KE100A	85.50	95.00	105.00	1	137.0	11.0	5.0
1.5KE100C	81.00	90.00	110.00	1	144.0	10.5	5.0
1.5KE120A	102.00	114.00	126.00	1	165.0	9.1	5.0
1.5KE120C	97.20	108.00	132.00	1	173.0	8.7	5.0
1.5KE150A	128.00	143.00	158.00	1	207.0	7.2	5.0
1.5KE150C	121.00	135.00	165.00	1	215.0	7.0	5.0
1.5KE160CA	136.00	152.00	168.00	1	219.0	6.8	5.0
1.5KE180A	154.00	171.00	189.00	1	246.0	6.1	5.0
1.5KE180C	146.00	162.00	198.00	1	258.0	5.8	5.0
1.5KE200A	171.00	190.00	210.00	1	274.0	5.5	5.0
1.5KE200C	162.00	180.00	220.00	1	287.0	5.2	5.0
1.5KE200CA	171.00	190.00	210.00	1	274.0	5.5	5.0
1.5KE250A	214.00	237.00	263.00	1	344.0	5.0	5.0
1.5KE250C	202.00	225.00	275.00	1	360.0	5.0	5.0
1.5KE300A	256.00	285.00	315.00	1	414.0	5.0	5.0
1.5KE300C	243.00	270.00	330.00	1	430.0	5.0	5.0

C or CA suffix denotes Bi-Directional - Electrical characteristics apply in both directions

SPC-F004.DWG

**DISCLAIMER:**  
ALL STATEMENTS AND TECHNICAL INFORMATION CONTAINED HEREIN ARE BASED UPON INFORMATION AND/OR TESTS WE BELIEVE TO BE ACCURATE AND RELIABLE. SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL, THE USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE AND ASSUME ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH.



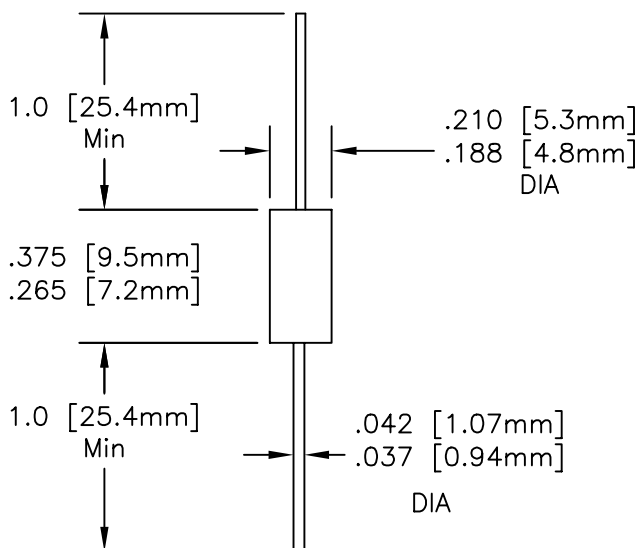
UNLESS OTHERWISE STATED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	JEFF MCVICKER	7/23/97	GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
	JOHN COLE	7/23/97	A	TA-91	TA-91.DWG	A
APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: INCHES [mm]		
BRETT BRAATZ	8/1/97			SHEET: 1 OF 3		

**FEATURES:**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction in Molded Plastic package
- 1500 W surge capability at 1 ms
- Excellent clamping capability
- Low zener impedance
- Fast response time: typically less than 1.0 ps from 0 volts to BV min.
- Typical  $I_R$  less than 1 uA above 10V
- High temperature soldering guaranteed: 260°C/10 seconds/.375", [9.5mm] lead length/5lbs., [2.3kg] tension

**MECHANICAL DATA**

- Case: JEDEC DO-201AE Molded plastic
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity Color band denoted cathode except Bipolar
- Mounting Position: Any
- Weight: 0.045 ounce [1.2 grams]



**MAXIMUM RATINGS AND CHARACTERISTICS**

Rating (At 25° C ambient temperature unless otherwise specified)	Symbol	Value	Units
Peak Power Dissipation at $T_A=25^\circ\text{C}$ , $T_P=1\text{ms}$ (NOTE 1)	$P_{PK}$	Minimum 1500	Watts
Steady State Power Dissipation at $T_L=75^\circ\text{C}$	PD	5	Watts
Lead Lengths .375", (9.5mm) (NOTE 2)			
Peak Forward Surge Current, 8.3ms Single Half Sine Wave	$I_{FSM}$	200	Amps
Superimposed on Rated Load (JEDEC Method) (NOTE 3)			
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175	°C
NOTES:			
1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig. 2			
2. Mounted on Copper Leaf Area of 0.79 in <sup>2</sup> (20mm <sup>2</sup> )			
3. 8.3ms single half sine-wave, duty cycle=4 pulses per minutes maximum			

SIZE A	DWG. NO. TA-91	ELECTRONIC FILE TA-91.DWG	REV A
SCALE: NTS		U.O.M.: INCHES [mm]	SHEET: 2 OF 3

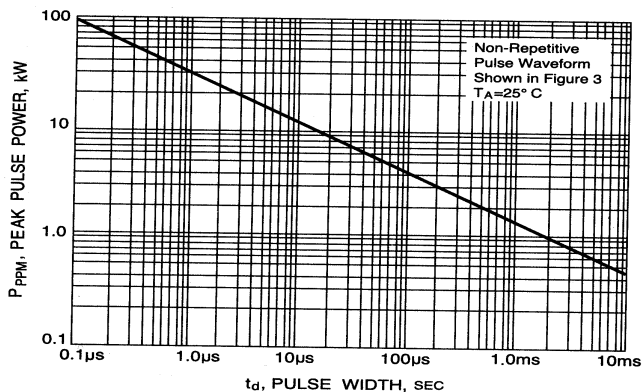


FIG. 1-PEAK PULSE POWER RATING CURVE

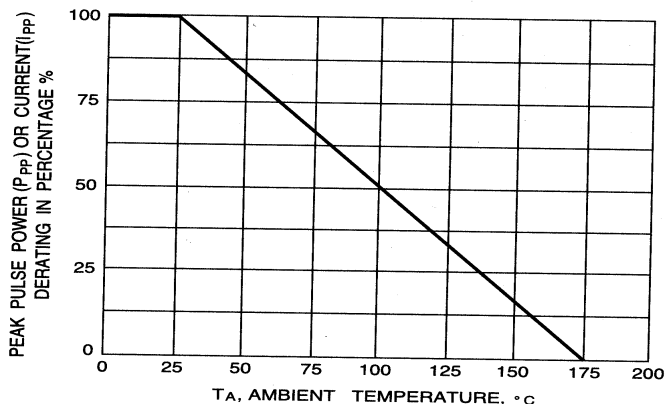


FIGURE 2-PULSE DERATING CURVE

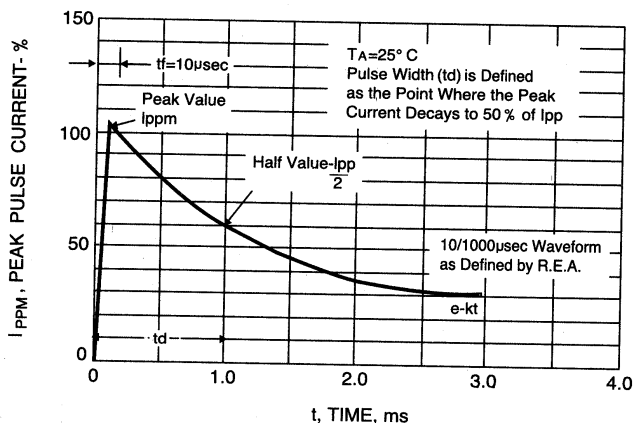


FIGURE 3-PULSE WAVEFORM

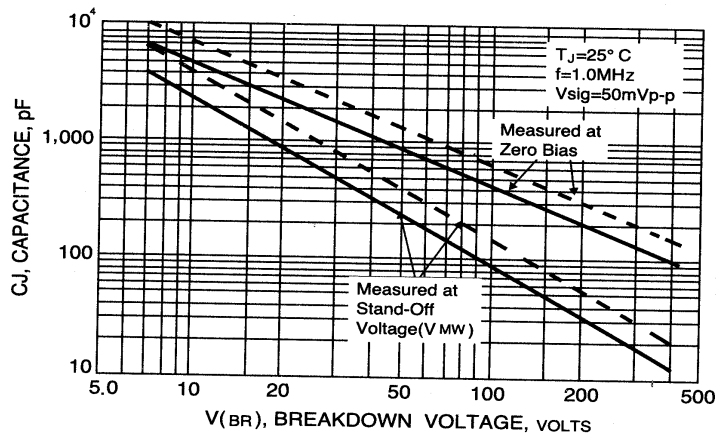


FIG. 4-TYPICAL JUNCTION CAPACITANCE

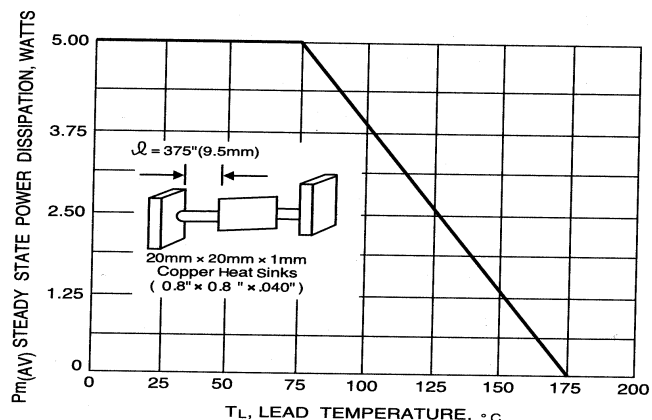


FIG. 5-STEADY STATE POWER DERATING CURVE

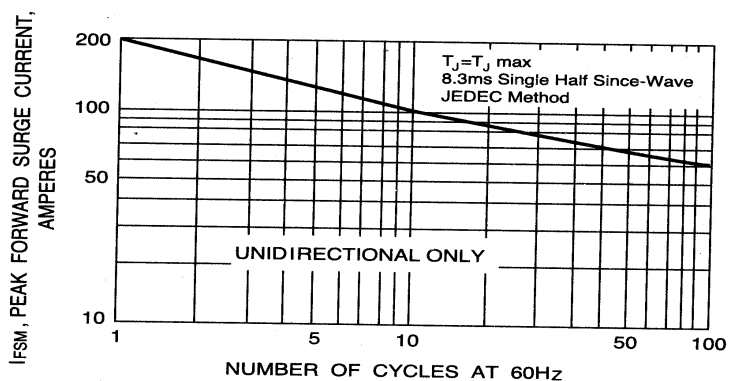


FIG. 6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL

SIZE A	DWG. NO. TA-91	ELECTRONIC FILE TA-91.DWG	REV A
SCALE: NTS		U.O.M.: INCHES [mm]	SHEET: 3 OF 3