DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

5KP5.0 THRU 5KP200CA

TECHNICAL SPECIFICATIONS OF TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE RANGE - 5.0 to 200Volts PEAK PULSE POWER - 5000 Watts

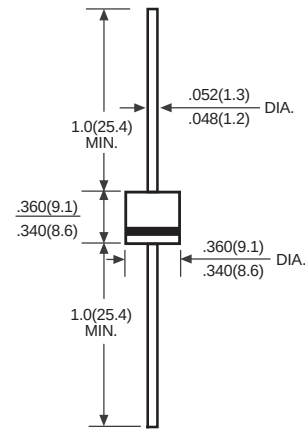
FEATURES

* Glass passivated junction
* 5000 Watts Peak Pulse Power capability on 10/1000 µs waveform
* Excellent clamping capability
* Low zener impedance
* Fast response time

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes positive end (cathode) except bidirectional types
* Mounting position: Any
* Weight: 2.1 gram

R-6



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load,
For capacitive load, derate current by 20%.

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA suffix (e.g. 5KP5.0C, 5KP200CA).
Electrical characteristics apply in both directions

	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 µs waveform (Note1,FIG.1)	P_{PPM}	Minimum 5000	Watts
Steady State Power Dissipation at T = 75°C Lead Lengths .375"(9.5mm) (Note 2)	$P_{M(AV)}$	8.0	Watts
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC Method) (Note 3)	I_{FSM}	400	Amps
Maximum Instantaneuos Forwaard Voltage at 50A for Unidirectional only	V_F	3.5	Volts
Operating and Storage Temperature Range	T_J , T_{STG}	-55 to + 175	°C

NOTES : 1. Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig. 2.
2. Mounted on Copper Leaf area of 0.8 X 0.8"(20 X 20mm) per Fig. 5
3. 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

RATING AND CHARACTERISTIC CURVES (5KP5.0 THRU 5KP200CA)

FIG. 1 - PEAK PULSE POWER RATING CURVE

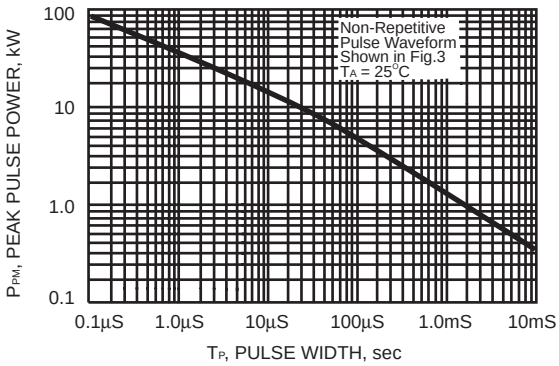


FIG. 2 - PULSE DERATING CURVE

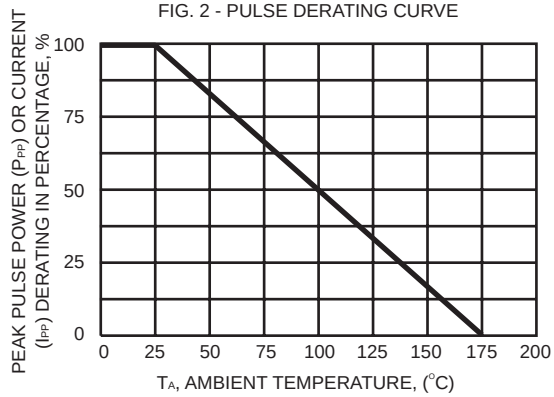


FIG. 3 - PULSE WAVEFORM

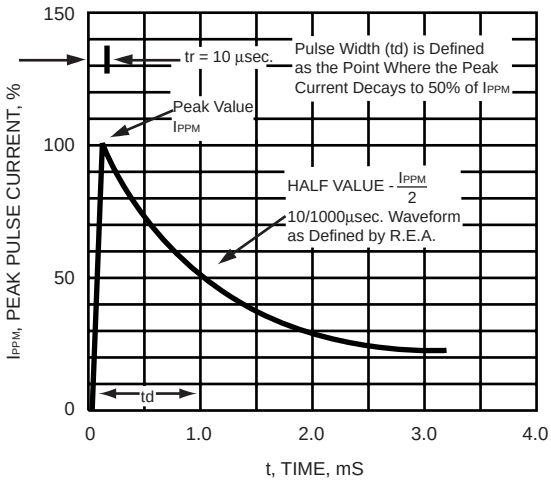


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

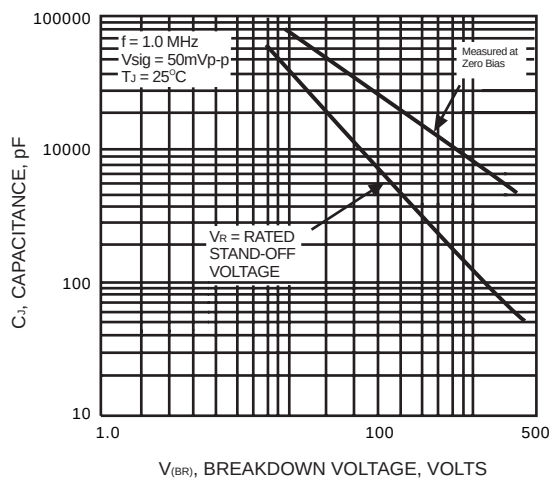


FIG. 5 - STEADY STATE POWER DERTING CURVE

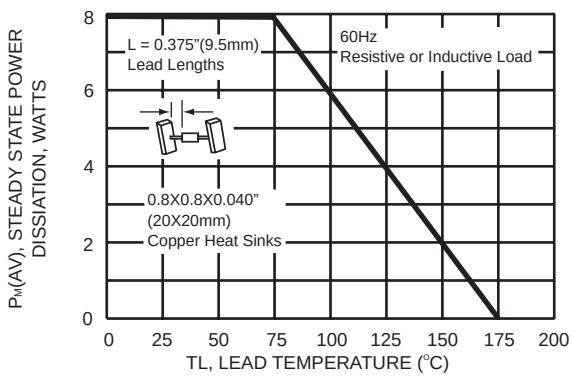
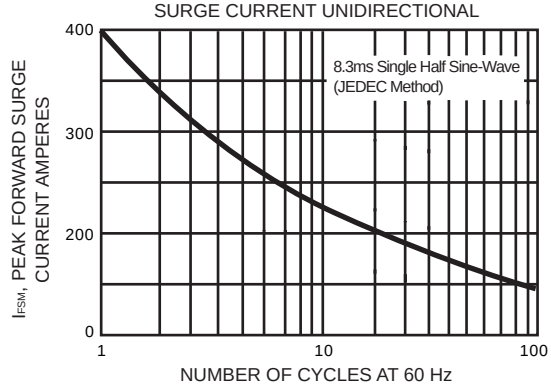


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL



5KP (5000W) SERIES TRANSIENT VOLTAGE SUPPRESSORS

TYPE	Reverse Stand-off Voltage	Breakdown Voltage @ I_T		Test Current	Maximum Reverse Leakage @ V_{RWM}		Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current
	V_{RWM}	V_{BR}		I_T	I_R		V_C	I_{PP}
		Min.	Max.		UNI-	BI-		
	V	V	V	mA	μA	μA	V	A
5KP5.0	5.0	6.40	7.55	50	5000	10000	9.6	520
5KP5.0A	5.0	6.40	7.25	50	5000	10000	9.2	543
5KP6.0	6.0	6.67	8.45	50	5000	10000	11.4	439
5KP6.0A	6.0	6.67	7.67	50	5000	10000	10.3	485
5KP6.5	6.5	7.22	9.14	50	2000	4000	12.3	407
5KP6.5A	6.5	7.22	8.30	50	2000	4000	11.2	447
5KP7.0	7.0	7.78	9.86	50	1000	2000	13.3	378
5KP7.0A	7.0	7.78	8.95	50	1000	2000	12.0	417
5KP7.5	7.5	8.33	10.67	5	250	500	14.3	350
5KP7.5A	7.5	8.33	9.58	5	250	500	12.9	388
5KP8.0	8.0	8.89	11.30	5	150	300	15.0	333
5KP8.0A	8.0	8.89	10.23	5	150	300	13.6	367
5KP8.5	8.5	9.44	11.92	5	50	100	15.9	314
5KP8.5A	8.5	9.44	10.82	5	50	100	14.4	347
5KP9.0	9.0	10.0	12.6	5	20	40	16.9	295
5KP9.0A	9.0	10.0	11.5	5	20	40	15.4	325
5KP10	10	11.1	14.1	5	10		18.8	266
5KP10A	10	11.1	12.8	5	10		17.0	294
5KP11	11	12.2	15.4	5	10		20.1	249
5KP11A	11	12.2	14.0	5	10		18.2	274
5KP12	12	13.3	16.9	5	10		22.0	227
5KP12A	12	13.3	15.3	5	10		19.9	251
5KP13	13	14.4	18.2	5	10		23.8	210
5KP13A	13	14.4	16.5	5	10		21.5	232
5KP14	14	15.6	19.8	5	10		25.8	194
5KP14A	14	15.6	17.9	5	10		23.2	215
5KP15	15	16.7	21.1	5	10		26.9	188
5KP15A	15	16.7	19.2	5	10		24.4	206
5KP16	16	17.8	22.6	5	10		28.8	176
5KP16A	16	17.8	20.5	5	10		26.0	192
5KP17	17	18.9	23.9	5	10		30.5	164
5KP17A	17	18.9	21.7	5	10		27.6	181
5KP18	18	20.0	25.3	5	10		32.2	155
5KP18A	18	20.0	23.3	5	10		29.2	172
5KP20	20	22.2	28.1	5	10		35.8	139
5KP20A	20	22.2	25.5	5	10		32.4	154
5KP22	22	24.4	30.9	5	10		39.4	127
5KP22A	22	24.4	28.0	5	10		35.5	141
5KP24	24	26.7	33.8	5	10		43.0	116
5KP24A	24	26.7	30.7	5	10		38.9	128
5KP26	26	28.9	36.6	5	10		46.6	107
5KP26A	26	28.9	33.2	5	10		42.1	119
5KP28	28	31.1	39.4	5	10		50.0	99
5KP28A	28	31.1	35.8	5	10		45.4	110
5KP30	30	33.3	42.2	5	10		53.5	93
5KP30A	30	33.3	38.3	5	10		48.4	103
5KP33	33	36.7	46.5	5	10		59.0	85
5KP33A	33	36.7	42.2	5	10		53.3	94
5KP36	36	40.0	50.7	5	10		64.3	78
5KP36A	36	40.0	46.0	5	10		58.1	85
5KP40	40	44.4	56.3	5	10		71.4	70
5KP40A	40	44.4	51.1	5	10		64.5	78

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	V_{RWM}	V_{BR}		I_T	I_R		V_C	I_{PP}
		Min.	Max.		UNI-	BI-		
	V	V	V	mA	µA	µA	V	A
5KP43	43	47.8	60.5	5	10		76.7	65
5KP43A	43	47.8	54.9	5	10		69.4	72
5KP45	45	50.0	63.3	5	10		80.3	62
5KP45A	45	50.0	57.5	5	10		72.7	69
5KP48	48	53.3	67.5	5	10		85.5	58
5KP48A	48	53.3	61.3	5	10		77.4	65
5KP51	51	56.7	71.8	5	10		91.1	55
5KP51A	51	56.7	65.2	5	10		82.4	61
5KP54	54	60.0	76.0	5	10		96.3	52
5KP54A	54	60.0	69.0	5	10		87.1	57
5KP58	58	64.4	81.6	5	10		103	49
5KP58A	58	64.4	74.1	5	10		93.6	53
5KP60	60	66.7	84.5	5	10		107	47
5KP60A	60	66.7	76.7	5	10		96.8	52
5KP64	64	71.1	90.1	5	10		114	44
5KP64A	64	71.1	81.8	5	10		103	49
5KP70	70	77.8	98.6	5	10		125	40
5KP70A	70	77.8	89.5	5	10		113	44
5KP75	75	83.3	105.7	5	10		134	37
5KP75A	75	83.3	95.8	5	10		121	41
5KP78	78	86.7	109.8	5	10		139	36
5KP78A	78	86.7	99.7	5	10		126	40
5KP85	85	94.4	119.2	5	10		151	33
5KP85A	85	94.4	108.2	5	10		137	36
5KP90	90	100	126.5	5	10		160	31
5KP90A	90	100	115.5	5	10		146	34
5KP100	100	111	141.0	5	10		179	28
5KP100A	100	111	128.0	5	10		162	31
5KP110	110	122	154.5	5	10		196	26
5KP110A	110	122	140.5	5	10		177	28
5KP120	120	133	169.0	5	10		214	23
5KP120A	120	133	153.0	5	10		193	20
5KP130	130	144	182.5	5	10		231	22
5KP130A	130	144	165.5	5	10		209	24
5KP150	150	167	211.5	5	10		268	19
5KP150A	150	167	192.5	5	10		243	21
5KP160	160	178	226.0	5	10		287	17
5KP160A	160	178	205.0	5	10		259	19
5KP170	170	189	239.5	5	10		304	16
5KP170A	170	189	217.5	5	10		275	18
5KP180	180	198	253.8	1	5		322	16
5KP180A	180	198	230.4	1	5		292	17
5KP190	190	209	267.9	1	5		340	15
5KP190A	190	209	243.2	1	5		308	16
5KP200	200	220	282.0	1	5		358	14
5KP200A	200	220	256.0	1	5		324	15

NOTES: 1. V_{BR} measured after I_T applied for 300µs. I_T= Square Wave Pulse or equivalent.

2. For bidirectional use "**C**" or "**CA**" suffixs for all types (e.g.: 5KP5.0**C**, 5KP5.0**CA**, 5KP200**C**, 5KP200**CA**). Electrical characteristics apply in both directions.

3. For bidirectional types having V_{RWM} of 10 volts and less, the I_D limit is doubled.

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