THE DATASHEET OF

30KP70A

SOLID STATE INC.

30KP SERIES

TRANSIENT VOLTAGE SUPPRESSOR

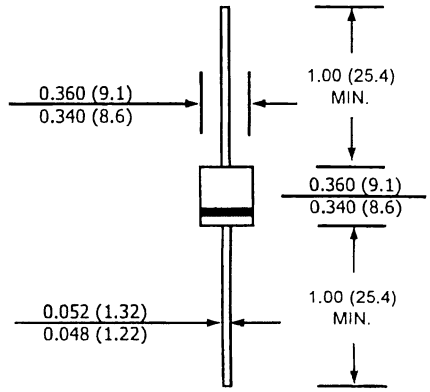
30000 Watts

FEATURES :

* Glass passivated junction chip
* Excellent Clamping Capability
* Fast Response Time
* Low Leakage Current
* Pb / RoHS Free

MECHANICAL DATA

* Case : Void-free molded plastic body
* Epoxy : UL94V-0 rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end except Bipolar.
* Mounting position : Any
* Weight : 2.1 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (Ta = 25 °C)

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation (10 x 1000µs, see Fig.2)	P_{PK}	30,000	W
Steady State Power Dissipation	P_D	7	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Uni-directional devices only)	I_{FSM}	250	A
Operating and Storage Temperature Range	T_J, T_{STG}	- 55 to + 175	°C

Fig. 1 - Pulse Derating Curve

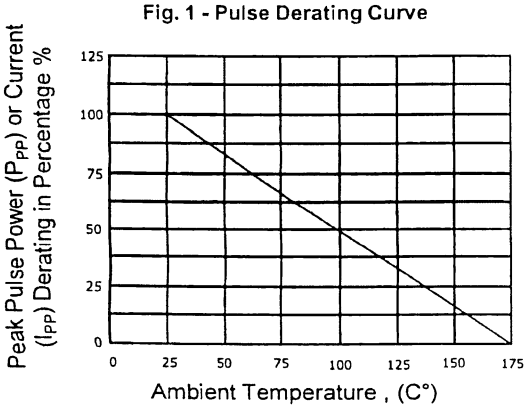
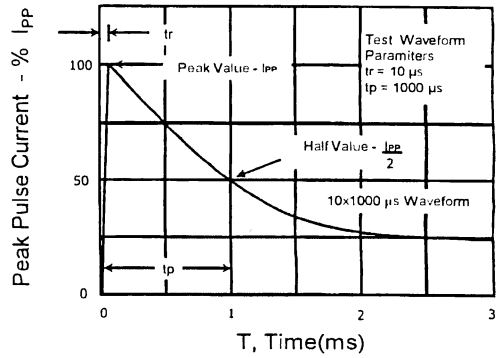


Fig. 2 - Pulse Wave Form



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SOLID STATE INC.

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Part Number (Uni-directional)	Part Number (Bi-directional)	Reverse Stand Off Voltage	Breakdown Voltage @ $I_{(BR)}$			Maximum Reverse Leakage @ V_{WM}	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current	Maximum $V_{(BR)}$ Temperature Coefficient
		V_{WM}	V_{BR} (V)		$I_{(BR)}$	I_D	V_C	I_{PP}	$\alpha_{V(BR)}$
		(V)	Min.	Max.	(mA)	(µA)	(V)	(A)	(mV/°C)
30KP22	30KP22C	22	24.4	29.8	50	10000	41.1	730	27
30KP22A	30KP22CA	22	24.4	26.9	50	10000	37.1	808	24
30KP24	30KP24C	24	26.7	32.6	50	10000	45.0	666	30
30KP24A	30KP24CA	24	26.7	29.5	50	10000	40.7	738	27
30KP26	30KP26C	26	28.9	35.3	50	10000	48.7	616	32
30KP26A	30KP26CA	26	28.9	31.9	50	10000	44.0	682	29
30KP28	30KP28C	28	31.1	38.0	50	8000	52.4	572	35
30KP28A	30KP28CA	28	31.1	34.4	50	8000	47.5	632	31
30KP30	30KP30C	30	33.3	40.7	50	8000	56.2	534	37
30KP30A	30KP30CA	30	33.3	36.9	50	8000	50.7	592	33
30KP33	30KP33C	33	36.7	44.9	50	5000	64.6	496	42
30KP33A	30KP33CA	33	36.7	40.6	50	5000	58.6	548	38
30KP36	30KP36C	36	40.0	48.9	50	5000	68.2	454	46
30KP36A	30KP36CA	36	40.0	44.2	50	5000	61.8	502	41
30KP40	30KP40C	40	44.4	54.3	20	1500	75.8	412	51
30KP40A	30KP40CA	40	44.4	49.1	20	1500	68.6	456	46
30KP43	30KP43C	43	47.8	58.4	10	500	79.0	380	55
30KP43A	30KP43CA	43	47.8	52.8	10	500	71.0	430	50
30KP45	30KP45C	45	50.0	61.1	5	150	80.7	372	57
30KP45A	30KP45CA	45	50.0	55.3	5	150	73.0	410	52
30KP48	30KP48C	48	53.3	65.1	5	150	85.9	350	62
30KP48A	30KP48CA	48	53.3	58.9	5	150	77.7	386	56
30KP51	30KP51C	51	56.7	69.3	5	50	91.5	328	66
30KP51A	30KP51CA	51	56.7	62.7	5	50	82.8	362	60
30KP54	30KP54C	54	60.0	73.3	5	25	96.8	310	70
30KP54A	30KP54CA	54	60.0	66.3	5	25	87.5	342	63
30KP58	30KP58C	58	64.4	78.7	5	15	104	288	76
30KP58A	30KP58CA	58	64.4	71.2	5	15	94	320	68
30KP60	30KP60C	60	66.7	81.5	5	15	107	280	78
30KP60A	30KP60CA	60	66.7	73.7	5	15	97.3	304	71
30KP64	30KP64C	64	71.1	86.9	5	10	115	260	84
30KP64A	30KP64CA	64	71.1	78.6	5	10	104	288	76
30KP70	30KP70C	70	77.8	95.1	5	10	126	238	92
30KP70A	30KP70CA	70	77.8	86.0	5	10	114	264	83
30KP75	30KP75C	75	83.3	102	5	10	135	222	100
30KP75A	30KP75CA	75	83.3	92.1	5	10	122	246	89
30KP78	30KP78C	78	86.7	106	5	10	140	214	104
30KP78A	30KP78CA	78	86.7	95.8	5	10	126	238	93
30KP85	30KP85C	85	94.4	115	5	10	152	198	113
30KP85A	30KP85CA	85	94.4	104	5	10	137	218	102
30KP90	30KP90C	90	100	122	5	10	160	188	120
30KP90A	30KP90CA	90	100	111	5	10	146	206	109
30KP100	30KP100C	100	111	136	5	10	179	168	134
30KP100A	30KP100CA	100	111	123	5	10	162	186	121

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Part Number (Uni-directional)	Part Number (Bi-directional)	Reverse Stand Off Voltage	Breakdown Voltage @ $I_{(BR)}$			Maximum Reverse Leakage @ V_{WM}	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current	Maximum $V_{(BR)}$ Temperature Coefficient
		V_{WM}	V_{BR} (V)		$I_{(BR)}$	I_D	V_C	I_{PP}	$\alpha_{V(BR)}$
		(V)	Min.	Max.	(mA)	(μA)	(V)	(A)	(mV/°C)
30KP110	30KP110C	110	122	149	5	10	196	154	147
30KP110A	30KP110CA	110	122	135	5	10	178	168	133
30KP120	30KP120C	120	133	163	5	10	214	140	161
30KP120A	30KP120CA	120	133	147	5	10	193	156	145
30KP130	30KP130C	130	144	176	5	10	231	130	174
30KP130A	30KP130CA	130	144	159	5	10	209	142	157
30KP150	30KP150C	150	167	204	5	10	268	112	202
30KP150A	30KP150CA	150	167	185	5	10	243	124	183
30KP160	30KP160C	160	178	218	5	10	287	104	216
30KP160A	30KP160CA	160	178	197	5	10	259	116	195
30KP170	30KP170C	170	189	231	5	10	304	98	229
30KP170A	30KP170CA	170	189	209	5	10	275	110	207
30KP180	30KP180C	180	200	244	5	10	321	94	242
30KP180A	30KP180CA	180	200	221	5	10	291	104	219
30KP200	30KP200C	200	222	271	5	10	356	84	269
30KP200A	30KP200CA	200	222	245	5	10	322	94	243
30KP220	30KP220C	220	245	299	5	10	393	76	297
30KP220A	30KP220CA	220	245	271	5	10	356	84	269
30KP250A	30KP250CA	250	278	308	5	10	403	74	306
30KP260A	30KP260CA	260	289	320	5	10	419	71	318
30KP280A	30KP280CA	280	311	345	5	10	451	66	344
30KP300A	30KP300CA	300	333	369	5	10	483	62	368
30KP320A	30KP320CA	320	356	392	5	10	530	57	370
30KP350A	30KP350CA	350	389	431	5	10	564	53	430
30KP360A	30KP360CA	360	400	436	5	10	640	55	380
30KP400A	30KP400CA	400	444	492	5	10	644	46	490

Note : (1) For bidirectional type having V_{WM} of 60 volts and less, the I_D limit is double.

Fig. 3 - Peak Pulse Power vs. Pulse Time

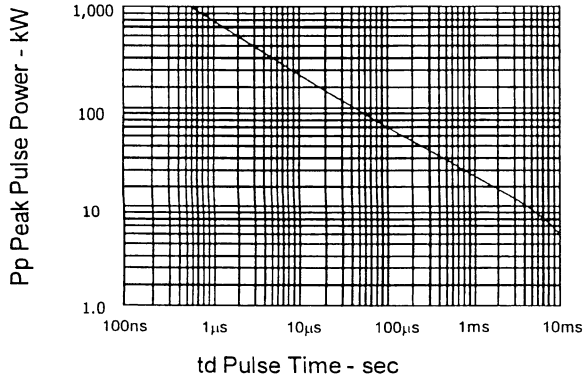
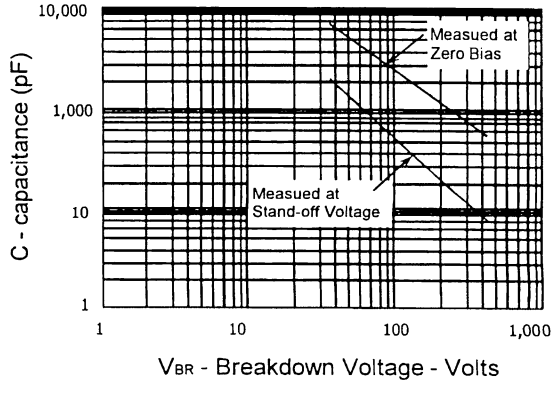


Fig. 4 - Typical Capacitance vs. Breakdown Voltage



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