

# 15KPxxCA SERIES

**V<sub>R</sub> : 12 - 400Volts**

**P<sub>PK</sub> : 15,000 Watts**

## FEATURES :

- \* Glass passivated junction chip
- \* Excellent Clamping Capability
- \* Fast Response Time
- \* Low Zener Impedance
- \* Low Leakage Current
- \* Fast Response Time : typically less than 1.0ps from 0 volt to BV, Bidirectional less than 10ns
- \* High temperature soldering guaranteed : 265°C/10 second  
0.375",(9.5mm) lead leagth.
- \* AEC-Q101 qualified
- \* **Pb / RoHS Free**

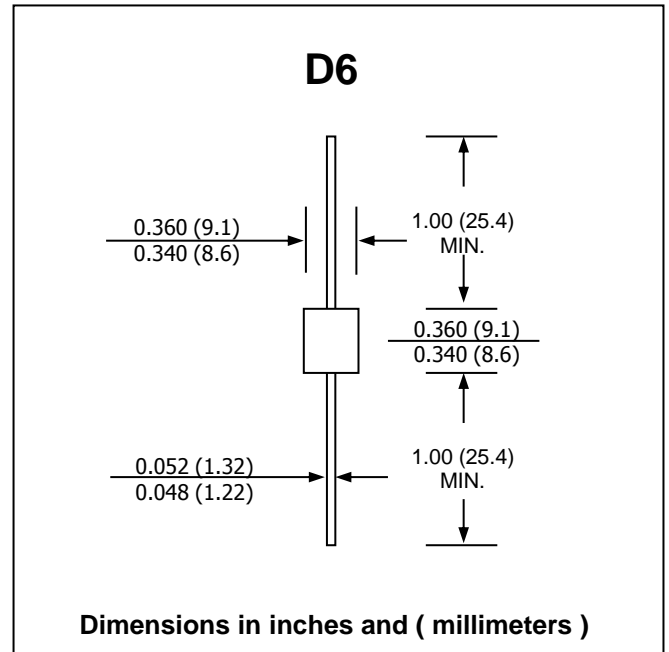
## MECHANICAL DATA

- \* 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
- \* Mounting position : Any
- \* Weight : 2.1 grams

## MAXIMUM RATINGS (Ta = 25°C)

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation (10X1000μs, see Fig.1 )	P <sub>PK</sub>	15,000	W
Steady State Power Dissipation	P <sub>D</sub>	7.0	W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 175	°C

## BI-DIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS



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

Type No.	Reverse Stand Off Voltage	Breakdown Voltage @ I <sub>T</sub>			Maximum Reverse Leakage @ V <sub>R</sub>	Maximum Clamping Voltage @ I <sub>PP</sub>	Maximum Peak Pulse Current	Max. Voltage Temperature Variation
	V <sub>WM</sub>	V <sub>BR</sub> (V)		I <sub>T</sub>	I <sub>R</sub>	V <sub>C</sub>	I <sub>PP</sub>	of V <sub>BR</sub> (mV/°C)
	(V)	Min.	Max.	(mA)	(μA)	(V)	(A)	
15KP12C	12	13.3	16.3	50	10,000	22.0	658	12
15KP12CA	12	13.3	14.7	50	10,000	19.9	725	12
15KP13C	13	14.4	17.6	50	10,000	23.8	607	13
15KP13CA	13	14.4	15.9	50	10,000	21.5	669	13
15KP14C	14	15.6	19.1	50	8,000	25.8	564	14
15KP14CA	14	15.6	17.2	50	8,000	23.2	622	14
15KP15C	15	16.7	20.4	50	8,000	26.9	526	16
15KP15CA	15	16.7	18.5	50	8,000	24.4	580	16
15KP16C	16	17.8	21.8	50	8,000	28.8	493	19
15KP16CA	16	17.8	19.7	50	8,000	26.0	544	17
15KP17C	17	18.9	23.1	50	5,000	32.2	464	19
15KP17CA	17	18.9	20.9	50	5,000	29.3	512	17
15KP18C	18	20.0	24.4	50	5,000	34.2	439	20
15KP18CA	18	20.0	22.1	50	5,000	30.9	485	18
15KP20C	20	22.2	27.1	20	1,500	37.9	396	24
15KP20CA	20	22.2	24.5	20	1,500	34.3	437	21
15KP22C	22	24.4	29.8	10	500	41.1	365	27
15KP22CA	22	24.4	26.9	10	500	37.1	404	24
15KP24C	24	26.7	32.6	5.0	150	45.0	333	30
15KP24CA	24	26.7	29.5	5.0	150	40.7	369	27
15KP26C	26	28.9	35.3	5.0	50	48.7	308	32
15KP26CA	26	28.9	31.9	5.0	50	44.0	341	29
15KP28C	28	31.1	38.0	5.0	25	52.4	286	35
15KP28CA	28	31.1	34.4	5.0	25	47.5	316	31
15KP30C	30	33.3	40.7	5.0	15	56.2	267	37
15KP30CA	30	33.3	36.8	5.0	15	50.7	296	33
15KP33C	33	36.7	44.9	5.0	10	60.6	248	42
15KP33CA	33	36.7	40.6	5.0	10	54.8	274	38
15KP36C	36	40.0	48.9	5.0	10	66.0	227	46
15KP36CA	36	40.0	44.2	5.0	10	59.7	251	41
15KP40C	40	44.4	54.3	5.0	10	72.8	206	51
15KP40CA	40	44.4	49.1	5.0	10	65.8	228	46
15KP43C	43	47.8	58.4	5.0	10	77.1	195	55
15KP43CA	43	47.8	52.8	5.0	10	69.7	215	50
15KP45C	45	50.0	61.1	5.0	10	80.7	186	57
15KP45CA	45	50.0	55.3	5.0	10	73.0	205	52
15KP48C	48	53.3	65.1	5.0	10	85.9	175	62
15KP48CA	48	53.3	58.9	5.0	10	77.7	193	56
15KP51C	51	56.7	69.3	5.0	10	91.5	164	66
15KP51CA	51	56.7	62.7	5.0	10	82.5	181	60
15KP54C	54	60.0	73.3	5.0	10	96.8	155	70
15KP54CA	54	60.0	66.3	5.0	10	87.5	171	63

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

Type No.	Reverse Stand Off Voltage	Breakdown Voltage @ I <sub>T</sub>			Maximum Reverse Leakage @ V <sub>R</sub>	Maximum Clamping Voltage @ I <sub>PP</sub>	Maximum Peak Pulse Current	Max. Voltage Temperature Variation
	V <sub>WM</sub>	V <sub>BR</sub> (V)		I <sub>T</sub>	I <sub>R</sub>	V <sub>C</sub>	I <sub>PP</sub>	of V <sub>BR</sub> (mV/°C)
	(V)	Min.	Max.	(mA)	(μA)	(V)	(A)	
15KP58C	58	64.4	78.7	5.0	10	104	144	76
15KP58CA	58	64.4	71.2	5.0	10	94	160	68
15KP60C	60	66.7	81.5	5.0	10	107	140	78
15KP60CA	60	66.7	73.7	5.0	10	97.3	154	70
15KP64C	64	71.1	86.9	5.0	10	115	130	84
15KP64CA	64	71.1	78.6	5.0	10	104	144	76
15KP70C	70	77.8	95.1	5.0	10	126	119	92
15KP70CA	70	77.8	86.0	5.0	10	114	132	83
15KP75C	75	83.3	102	5.0	10	135	111	100
15KP75CA	75	83.3	92.1	5.0	10	122	123	89
15KP78C	78	86.7	106	5.0	10	140	107	104
15KP78CA	78	86.7	95.8	5.0	10	126	119	93
15KP85C	85	94.4	115	5.0	10	152	99	113
15KP85CA	85	94.4	104	5.0	10	137	109	102
15KP90C	90	100	122	5.0	10	160	94	120
15KP90CA	90	100	111	5.0	10	146	103	110
15KP100C	100	111	136	5.0	10	179	84	134
15KP100CA	100	111	123	5.0	10	162	93	123
15KP110C	110	122	149	5.0	10	196	77	147
15KP110CA	110	122	135	5.0	10	178	84	133
15KP120C	120	133	163	5.0	10	214	70	161
15KP120CA	120	133	147	5.0	10	193	78	146
15KP130C	130	144	176	5.0	10	231	65	174
15KP130CA	130	144	159	5.0	10	209	72	158
15KP150C	150	167	204	5.0	10	268	56	202
15KP150CA	150	167	185	5.0	10	243	62	184
15KP160C	160	178	218	5.0	10	287	52	216
15KP160CA	160	178	197	5.0	10	259	58	196
15KP170C	170	189	231	5.0	10	304	49	229
15KP170CA	170	189	209	5.0	10	275	55	208
15KP180C	180	200	244	5.0	10	321	47	242
15KP180CA	180	200	221	5.0	10	287	52	220
15KP200C	200	222	271	5.0	10	356	42	296
15KP200CA	200	222	245	5.0	10	325	46	274
15KP220C	220	245	299	5.0	10	393	38	297
15KP220CA	220	245	271	5.0	10	347	43	273
15KP240C	240	267	326	5.0	10	428	35	324
15KP240CA	240	267	295	5.0	10	387	39	300
15KP260C	260	289	353	5.0	10	464	32	352
15KP260CA	260	289	319	5.0	10	419	36	317
15KP280C	280	311	380	5.0	10	500	30	378
15KP280CA	280	311	344	5.0	10	452	33	342

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

Type No.	Reverse Stand Off Voltage	Breakdown Voltage @ $I_T$			Maximum Reverse Leakage @ $V_R$	Maximum Clamping Voltage @ $I_{PP}$	Maximum Peak Pulse Current	Max. Voltage Temperature Variation of $V_{BR}$
	$V_{WM}$	$V_{BR}$ (V)		$I_T$	$I_R$	$V_C$	$I_{PP}$	(mV/°C)
	(V)	Min.	Max.	(mA)	( $\mu$ A)	(V)	(A)	
15KP300C	300	333	406	5.0	10	535	28	396
15KP300CA	300	333	369	5.0	10	483	31	368
15KP320C	320	356	434	5.0	10	588	26	398
15KP320CA	320	356	392	5.0	10	530	29	370
15KP350C	350	389	475	5.0	10	637	24	458
15KP350CA	350	389	431	5.0	10	564	27	430
15KP360C	360	400	488	5.0	10	635	24	408
15KP360CA	360	400	436	5.0	10	567	27	380
15KP400C	400	444	542	5.0	10	730	21	518
15KP400CA	400	444	492	5.0	10	644	23	490

**Note:** (1) Suffix " A " denotes 5% tolerance device , no suffix denotes a 10% tolerance device.

(2) For bidirectional type having  $V_{WM}$  of 30 volts and less, the  $I_R$  limit is double.

## RATING AND CHARACTERISTIC CURVES ( 15KPxxCA SERIES )

FIG.1 - PULSE WAVE FORM

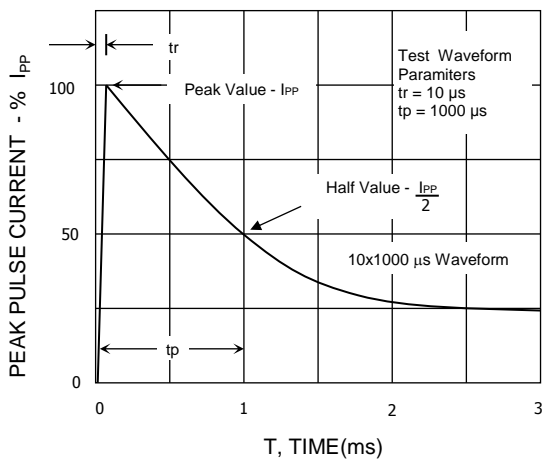


FIG.2 - PEAK PULSE POWER VS. PULSE TIME

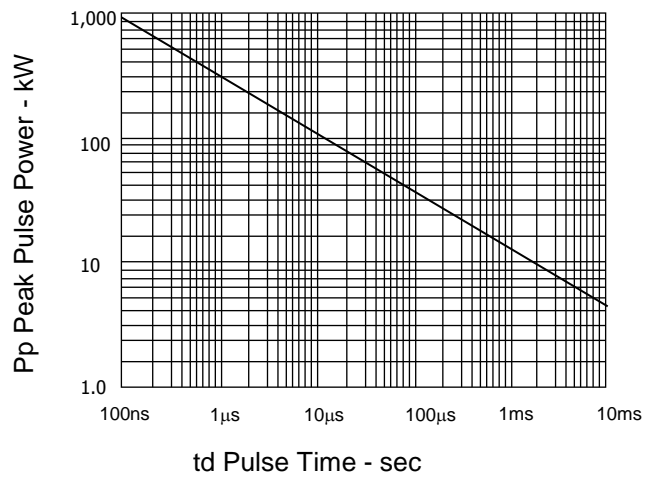


FIG.3 - TYPICAL CAPAITANCE  
VS. BREAKDOWN VOLTAGE

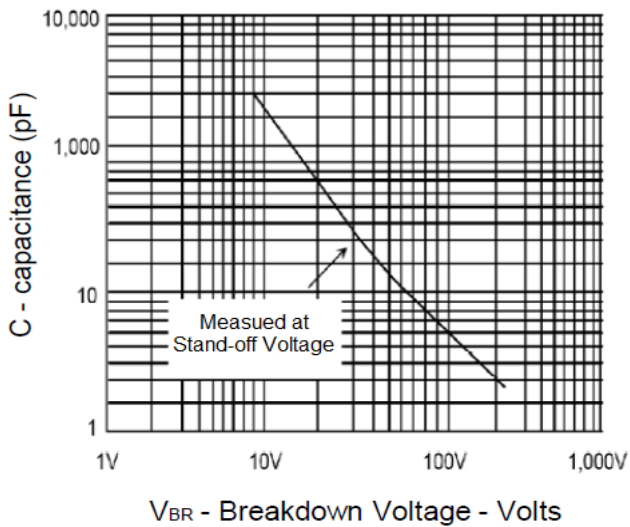


FIG.4 - PULSE DERATING CURVE

