



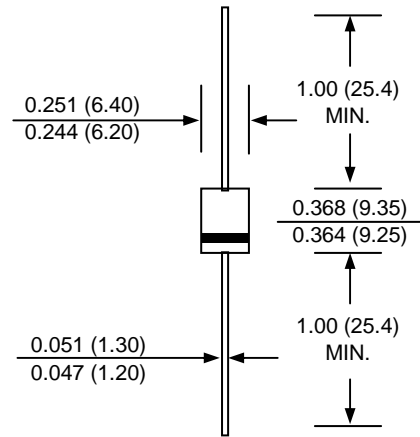
## Features

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

## Mechanical Data

- ◇ Case : molded plastic
- ◇ Epoxy : UL94V-O rate flame retardant
- ◇ Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity : Color band denotes cathode end
- ◇ Mounting position : Any
- ◇ Weight : 1.40 grams (approximate)

## DO-204AR

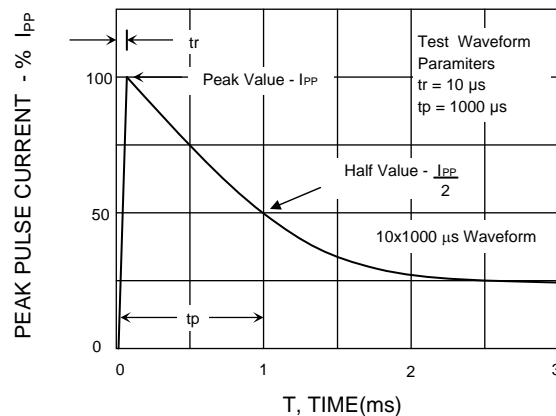


Dimensions in inches and ( millimeters )

## MAXIMUM RATINGS (T<sub>a</sub> = 25 °C)

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation (10 x 1000μs, see Fig.1 )	P <sub>PK</sub>	30,000	W
Steady State Power Dissipation	P <sub>D</sub>	7	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Uni-directional devices only)	I <sub>FSM</sub>	250	A
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 65 to + 150	°C

Fig. 1 - Pulse Wave Form





# 30KP33S,SC SERIES

30K Watts TVS Diodes

## 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)	( $\mu$ A)	(V)	(A)	(mV/°C)
30KP33S	30KP33SC	33	36.7	44.9	50	5000	64.6	496	42
30KP33SA	30KP33SCA	33	36.7	40.6	50	5000	58.6	548	38
30KP36S	30KP36SC	36	40.0	48.9	50	5000	68.2	454	46
30KP36SA	30KP36SCA	36	40.0	44.2	50	5000	61.8	502	41
30KP40S	30KP40SC	40	44.4	54.3	20	1500	75.8	412	51
30KP40SA	30KP40SCA	40	44.4	49.1	20	1500	68.6	456	46
30KP43S	30KP43SC	43	47.8	58.4	10	500	79.0	380	55
30KP43SA	30KP43SCA	43	47.8	52.8	10	500	71.0	430	50
30KP45S	30KP45SC	45	50.0	61.1	5	150	80.7	372	57
30KP45SA	30KP45SCA	45	50.0	55.3	5	150	73.0	410	52
30KP48S	30KP48SC	48	53.3	65.1	5	150	85.9	350	62
30KP48SA	30KP48SCA	48	53.3	58.9	5	150	77.7	386	56
30KP51S	30KP51SC	51	56.7	69.3	5	50	91.5	328	66
30KP51SA	30KP51SCA	51	56.7	62.7	5	50	82.8	362	60
30KP54S	30KP54SC	54	60.0	73.3	5	25	96.8	310	70
30KP54SA	30KP54SCA	54	60.0	66.3	5	25	87.5	342	63
30KP58S	30KP58SC	58	64.4	78.7	5	15	104	288	76
30KP58SA	30KP58SCA	58	64.4	71.2	5	15	94	320	68
30KP60S	30KP60SC	60	66.7	81.5	5	15	107	280	78
30KP60SA	30KP60SCA	60	66.7	73.7	5	15	97.3	304	71
30KP64S	30KP64SC	64	71.1	86.9	5	10	115	260	84
30KP64SA	30KP64SCA	64	71.1	78.6	5	10	104	288	76
30KP70S	30KP70SC	70	77.8	95.1	5	10	126	238	92
30KP70SA	30KP70SCA	70	77.8	86.0	5	10	114	264	83
30KP75S	30KP75SC	75	83.3	102	5	10	135	222	100
30KP75SA	30KP75SCA	75	83.3	92.1	5	10	122	246	89
30KP78S	30KP78SC	78	86.7	106	5	10	140	214	104
30KP78SA	30KP78SCA	78	86.7	95.8	5	10	126	238	93
30KP85S	30KP85SC	85	94.4	115	5	10	152	198	113
30KP85SA	30KP85SCA	85	94.4	104	5	10	137	218	102
30KP90S	30KP90SC	90	100	122	5	10	160	188	120
30KP90SA	30KP90SCA	90	100	111	5	10	146	206	109
30KP100S	30KP100SC	100	111	136	5	10	179	168	134
30KP100SA	30KP100SCA	100	111	123	5	10	162	186	121
30KP110S	30KP110SC	110	122	149	5	10	196	154	147
30KP110SA	30KP110SCA	110	122	135	5	10	178	168	133
30KP120S	30KP120SC	120	133	163	5	10	214	140	161
30KP120SA	30KP120SCA	120	133	147	5	10	193	156	145
30KP130S	30KP130SC	130	144	176	5	10	231	130	174

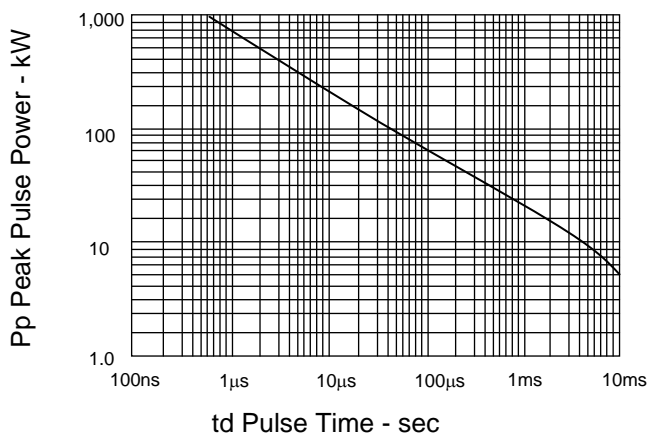
### ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

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)	( $\mu$ A)	(V)	(A)	(mV/°C)
30KP130SA	30KP130SCA	130	144	159	5	10	209	142	157
30KP150S	30KP150SC	150	167	204	5	10	268	112	202
30KP150SA	30KP150SCA	150	167	185	5	10	243	124	183
30KP160S	30KP160SC	160	178	218	5	10	287	104	216
30KP160SA	30KP160SCA	160	178	197	5	10	259	116	195
30KP170S	30KP170SC	170	189	231	5	10	304	98	229
30KP170SA	30KP170SCA	170	189	209	5	10	275	110	207
30KP180S	30KP180SC	180	200	244	5	10	321	94	242
30KP180SA	30KP180SCA	180	200	221	5	10	291	104	219
30KP200S	30KP200SC	200	222	271	5	10	356	84	269
30KP200SA	30KP200SCA	200	222	245	5	10	322	94	243
30KP220S	30KP220SC	220	245	299	5	10	393	76	297
30KP220SA	30KP220SCA	220	245	271	5	10	356	84	269
30KP250SA	30KP250SCA	250	278	308	5	10	403	74	306
30KP260SA	30KP260SCA	260	289	320	5	10	419	71	318
30KP280SA	30KP280SCA	280	311	345	5	10	451	66	344
30KP300SA	30KP300SCA	300	333	369	5	10	483	62	368
30KP350SA	30KP350SCA	350	389	431	5	10	564	53	430
30KP400SA	30KP400SCA	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. 2 - Peak Pulse Power vs. Pulse Time**



**Fig. 3 - Typical Capacitance vs. Breakdown Voltage**

