

MDE Semiconductor, Inc.

78-150 Calle Tampico, Unit 210 La Quinta, CA. U.S.A. 92253 Tel: 760-564-8656 • Fax: 760-564-2414

30KP SERIES

PRELIMINARY

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE-30.0 TO 288 Volts

30000 Watt Peak Pulse Power

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 30000W Peak Pulse Power capability on 10/1000 μ s waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.05%
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV
- Typical I_d less than 1 μ A above 10V
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension

MECHANICAL DATA

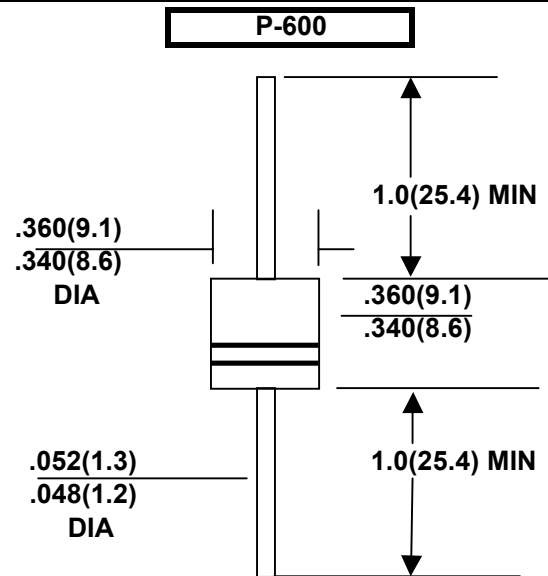
Case:Molded plastic over glass passivated junction

Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denoted positive end (cathode) except Bipolar

Mounting Position: Any

Weight: 0.07 ounce, 2.1 gram



Dimensions in inches (millimeters)

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 30KP30 thru types 30KP288

Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 μ s waveform (NOTE 1)	Pppm	Minimum 30000	Watts
Peak Pulse Current of on 10-1000 μ s waveform (NOTE 1)	Ippm	SEE TABLE 1	Amps
Steady State Power Dissipation at $T_I=75^\circ\text{C}$ Lead Lengths.375", (9.5mm)(NOTE 2)	Pm(AV)	8.0	Watts
Peak Forward Surge Current, 8.3ms Sine-Wave Superimposed on Rated Load, (JEDEC Method) (NOTE 3)	IFSM	400.0	Amps
Operatings and Storage Temperature Range	Tj, Tstg	-55 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 Pad area of 0.8x0.8" (20x20mm) per Fig.5.

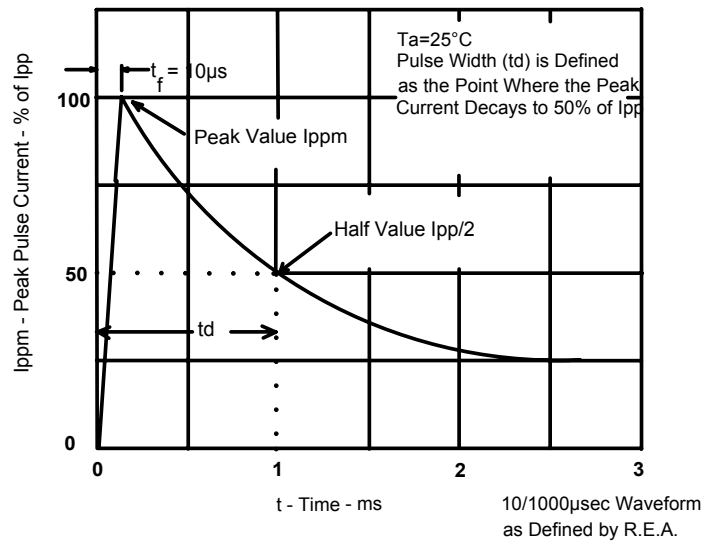
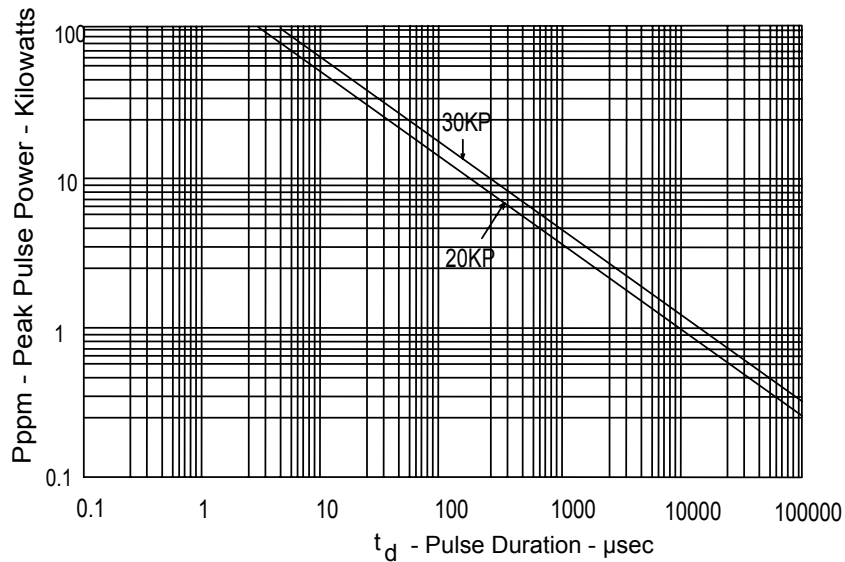
3.8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum

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1-800-831-4881 Email: sales@mdesemiconductor.com Web: www.mdesemiconductor.com

RATINGS AND CHARACTERISTIC CURVES 20KP / 30KP SERIES



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30000 Watt TVS

UNI-DIRECTIONAL PART NUMBER	REVERSE STANDOFF 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 (μA)
30KP30	30.00	38.40	43.80	50	57.5	522.0	5000
30KP30A	30.00	38.40	42.00	50	55.1	544.0	5000
30KP36	36.00	40.02	48.90	50	68.3	439.0	5000
30KP36A	36.00	40.02	44.22	50	61.7	486.0	5000
30KP39	39.00	43.32	52.92	50	73.7	407.0	2000
30KP39	39.00	43.32	47.88	50	67.1	447.0	2000
30KP42	42.00	46.68	57.06	50	79.6	377.0	1000
30KP42A	42.00	46.68	51.60	50	71.9	417.0	1000
30KP45	45.00	49.98	61.20	5	85.7	350.0	250
30KP45A	45.00	49.98	55.26	5	77.3	388.0	250
30KP48	48.00	53.34	65.40	5	89.8	334.0	20
30KP48A	48.00	53.34	58.98	5	81.5	368.0	20
30KP51	51.00	56.64	69.00	5	95.2	315.0	15
30KP51A	51.00	56.64	62.40	5	86.2	348.0	15
30KP54	54.00	60.00	73.20	5	101.4	296.0	10
30KP54A	54.00	60.00	66.60	5	92.3	325.0	10
30KP60	60.00	66.60	81.60	5	112.8	266.0	10
30KP60A	60.00	66.60	73.80	5	101.7	295.0	10
30KP66	66.00	73.20	89.40	5	120.5	249.0	10
30KP66A	66.00	73.20	81.00	5	109.1	275.0	10
30KP72	72.00	79.80	97.80	5	131.6	228.0	10
30KP72A	72.00	79.80	88.20	5	119.0	252.0	10
30KP78	78.00	86.40	105.60	5	142.9	210.0	10
30KP78A	78.00	86.40	95.40	5	128.8	233.0	10
30KP84	84.00	93.60	114.60	5	154.6	194.0	10
30KP84A	84.00	93.60	103.20	5	138.9	216.0	10
30KP90	90.00	100.20	122.40	5	161.3	186.0	10
30KP90A	90.00	100.20	111.00	5	146.3	205.0	10
30KP96	96.00	106.80	130.80	5	172.4	174.0	10
30KP96A	96.00	106.80	118.20	5	155.4	193.0	10
30KP102	102.00	113.40	138.60	5	182.9	164.0	10
30KP102A	102.00	113.40	125.40	5	165.7	181.0	10
30KP108	108.00	120.00	146.40	5	193.5	155.0	10
30KP108A	108.00	120.00	132.60	5	174.4	172.0	10
30KP120	120.00	133.20	162.60	5	214.3	140.0	10
30KP120A	120.00	133.20	147.00	5	194.8	154.0	10
30KP132	132.00	146.40	178.80	5	236.2	127.0	10
30KP132A	132.00	146.40	161.40	5	212.8	141.0	10
30KP144	144.00	160.20	195.60	5	258.6	116.0	10
30KP144A	144.00	160.20	177.00	5	232.6	129.0	10
30KP156	156.00	173.40	211.80	5	280.4	107.0	10
30KP156A	156.00	173.40	191.40	5	252.1	119.0	10
30KP168	168.00	186.60	228.00	5	300.0	100.0	10
30KP168A	168.00	186.60	206.40	5	272.7	110.0	10
30KP180	180.00	199.80	244.20	5	320.5	93.6	10
30KP180A	180.00	199.80	220.80	5	291.3	103.0	10
30KP198	198.00	220.20	269.40	5	353.8	84.8	10
30KP198A	198.00	220.20	243.60	5	319.5	93.9	10

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30KP216	216.00	240.00	293.40	5	385.4	77.8	10
30KP216A	216.00	240.00	265.20	5	348.4	86.1	10
30KP240	240.00	266.40	325.80	5	428.0	70.1	10
30KP240A	240.00	266.40	294.60	5	386.6	77.6	10
30KP258	256.00	286.80	350.40	5	460.1	65.2	10
30KP258A	256.00	286.80	316.80	5	416.1	72.1	10
30KP270	280.00	300.00	366.60	5	481.5	62.3	10
30KP270A	280.00	300.00	331.80	5	436.0	68.8	10
30KP288	300.00	319.80	391.20	5	512.8	58.5	10
30KP288	300.00	319.80	353.40	5	463.7	64.7	10

For Bidirectional type having Vrwm of 10volts and less, the IR limit is double.