

Silicon Avalanche Diodes

15000 Watt Peak Pulse Power Transient Voltage Suppressor

15KP Series

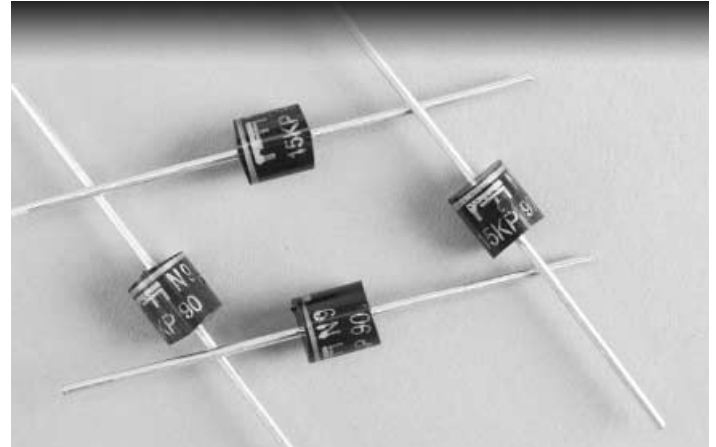


FEATURES

- Glass passivated junction
- Excellent clamping capability
- Fast response time
- Low zener impedance
- 100% surge tested
- UL recognised

MAXIMUM RATING

- Peak Pulse Power (Ppk): 15000 Watts (10 x 1000µs)@25°C (see diagram on page 3 for wave form)
- 7 watt steady state
- Response time: 1×10^{-12} seconds (theoretical)
- Forward surge rating: 200 Amps, 8.3ms half sine wave, (uni-directional devices only)
- Operating & storage temperature: -55°C to +150°C



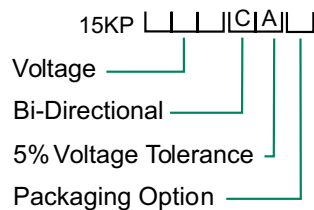
MECHANICAL CHARACTERISTICS

- Case: JEDEC R6; Molded plastic over glass passivated junction
- Terminals: Axial leads, solderable per MIL-STD-202 Method 208
- Solderable leads = 230°C for 10 seconds (1.59mm from case)
- Polarity: Cathode indicated by colour band
- Weight: 2.0 grammes (approx)

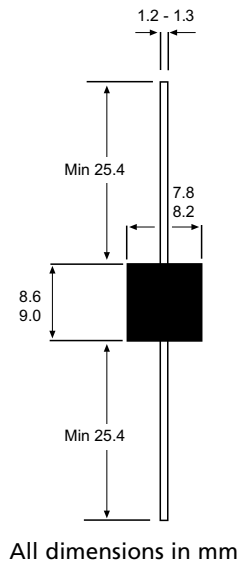
Agency Approvals: Recognized under the Components Program of Underwriters Laboratories.

Agency File Number: E128662

ORDERING INFORMATION



B = Bulk (500 pcs)
T = Tape and reeled (1000 pcs)



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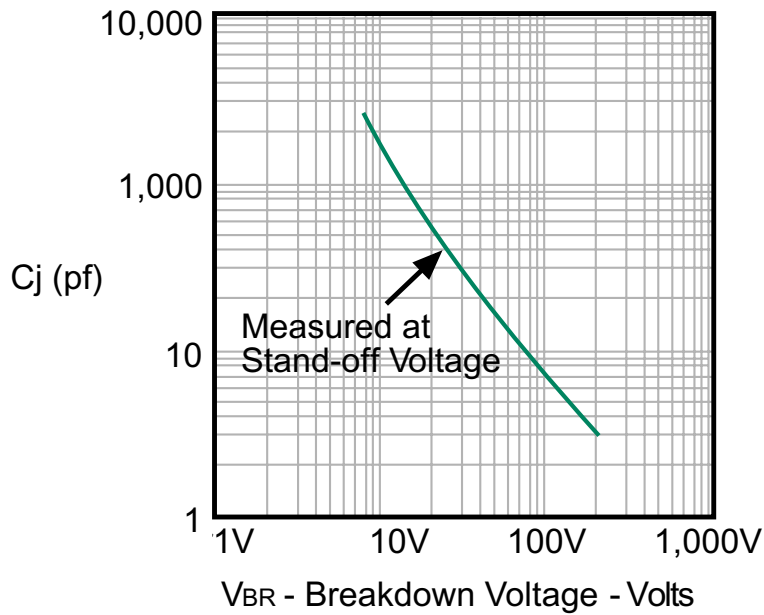


Figure 1 - Typical capacitance vs. Breakdown Voltage

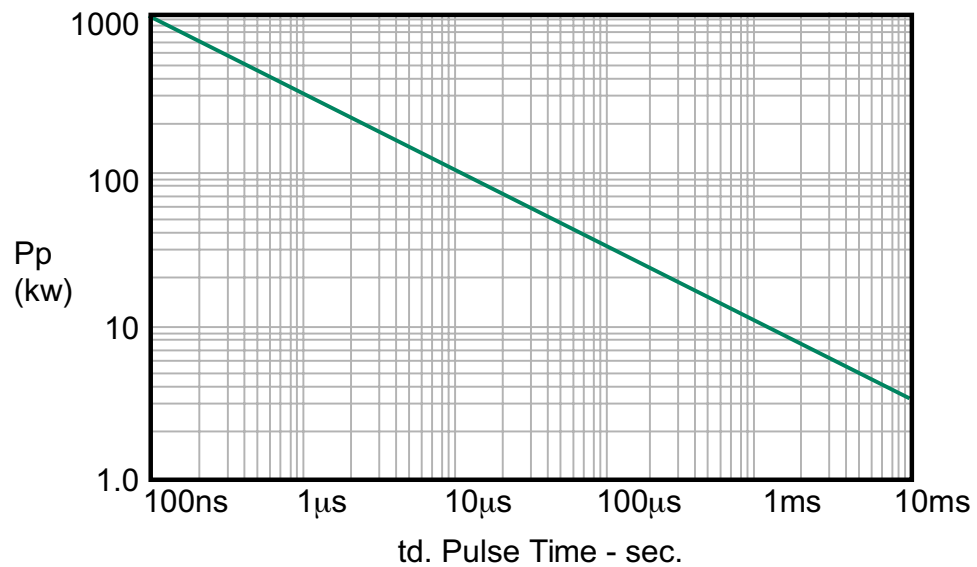


Figure 2 - Peak Pulse Power vs. Pulse Time

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ELECTRICAL SPECIFICATION @ Tamb 25°C

Part Number (Uni)	Part Number (Bi)	Reverse Stand off Voltage V _R (Volts)	Breakdown Voltage V _{BR} (Volts) @ I _T		Maximum Reverse Leakage I _R @ V _R (μA)	Maximum Clamping Voltage V _C @ I _{PP} (Volts)	Maximum Peak Pulse Current I _{PP} (A)	Max Voltage Temperature Variation of V _{BR} (mV/°C)
			MIN	(mA)				
15KP17	15KP17C	17.0	18.9	50.0	5000.0	32.2	464.0	19.0
15KP17A	15KP17CA	17.0	18.9	50.0	5000.0	29.3	512.0	17.0
15KP18	15KP18C	18.0	20.0	50.0	5000.0	34.2	439.0	20.0
15KP18A	15KP18CA	18.0	20.0	50.0	5000.0	30.9	485.0	18.0
15KP20	15KP20C	20.0	22.2	20.0	1500.0	37.9	396.0	24.0
15KP20A	15KP20CA	20.0	22.2	20.0	1500.0	34.3	437.0	21.0
15KP22	15KP22C	22.0	24.4	10.0	500.0	41.1	365.0	27.0
15KP22A	15KP22CA	22.0	24.4	10.0	500.0	37.1	404.0	24.0
15KP24	15KP24C	24.0	26.7	5.0	150.0	45.0	333.0	30.0
15KP24A	15KP24CA	24.0	26.7	5.0	150.0	40.7	369.0	27.0
15KP26	15KP26C	26.0	28.9	5.0	50.0	48.7	308.0	32.0
15KP26A	15KP26CA	26.0	28.9	5.0	50.0	44.0	341.0	29.0
15KP28	15KP28C	28.0	31.1	5.0	25.0	52.4	286.0	35.0
15KP28A	15KP28CA	28.0	31.1	5.0	25.0	47.5	316.0	31.0
15KP30	15KP30C	30.0	33.3	5.0	15.0	56.2	267.0	27.0
15KP30A	15KP30CA	30.0	33.3	5.0	15.0	50.7	296.0	34.0
15KP33*	15KP33C	33.0	36.7	5.0	10.0	60.6	248.0	42.0
15KP33A*	15KP33CA	33.0	36.7	5.0	10.0	54.8	274.0	38.0
15KP36*	15KP36C*	36.0	40.0	5.0	10.0	66.0	227.0	46.0
15KP36A*	15KP36CA*	36.0	40.0	5.0	10.0	59.7	251.0	41.0
15KP40*	15KP40C	40.0	44.4	5.0	10.0	72.8	206.0	51.0
15KP40A*	15KP40CA	40.0	44.4	5.0	10.0	65.8	228.0	46.0
15KP43	15KP43C	43.0	47.8	5.0	10.0	77.1	195.0	55.0
15KP43A	15KP43CA	43.0	47.8	5.0	10.0	69.7	215.0	50.0
15KP45	15KP45C	45.0	50.0	5.0	10.0	80.7	186.0	57.0
15KP45A	15KP45CA	45.0	50.0	5.0	10.0	73.0	205.0	52.0
15KP48*	15KP48C*	48.0	53.3	5.0	10.0	85.9	175.0	62.0
15KP48A*	15KP48CA*	48.0	53.3	5.0	10.0	77.7	193.0	56.0
15KP51	15KP51C	51.0	56.7	5.0	10.0	91.5	164.0	66.0
15KP51A	15KP51CA	51.0	56.7	5.0	10.0	82.8	181.0	60.0
15KP54	15KP54C*	54.0	60.0	5.0	10.0	96.8	155.0	70.0
15KP54A	15KP54CA*	54.0	60.0	5.0	10.0	87.5	171.0	63.0
15KP58	15KP58C	58.0	64.4	5.0	10.0	104.0	144.0	76.0
15KP58A	15KP58CA	58.0	64.4	5.0	10.0	94.0	160.0	68.0
15KP60	15KP60C	60.0	66.7	5.0	10.0	107.0	140.0	78.0
15KP60A	15KP60CA	60.0	66.7	5.0	10.0	97.3	154.0	71.0
15KP64	15KP64C	64.0	71.1	5.0	10.0	115.0	130.0	84.0
15KP64A	15KP64CA	64.0	71.1	5.0	10.0	104.0	144.0	76.0
15KP70	15KP70C*	70.0	77.8	5.0	10.0	126.0	119.0	92.0
15KP70A	15KP70CA*	70.0	77.8	5.0	10.0	114.0	132.0	83.0

Suffix 'C' denotes Bi-directional device. Suffix 'A' denotes 5% tolerance device, no suffix denotes a 10% tolerance device. Maximum breakdown voltage is not specified.

* Preferred voltages.

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Part Number (Uni)	Part Number (Bi)	Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Maximum Reverse Leakage I_R @ V_R (μA)	Maximum Clamping Voltage V_C @ I_{PP} (Volts)	Maximum Peak Pulse Current I_{PP} (A)	Max Voltage Temperature Variation of V_{BR} (mV/°C)
			MIN	(mA)				
15KP75	15KP75C	75.0	83.3	5.0	10.0	135.0	111.0	100.0
15KP75A	15KP75CA	75.0	83.3	5.0	10.0	122.0	123.0	89.0
15KP78	15KP78C	78.0	86.7	5.0	10.0	140.0	107.0	104.0
15KP78A	15KP78CA	78.0	86.7	5.0	10.0	126.0	119.0	93.0
15KP85	15KP85C	85.0	94.4	5.0	10.0	152.0	99.0	113.0
15KP85A	15KP85CA	85.0	94.4	5.0	10.0	137.0	109.0	102.0
15KP90	15KP90C	90.0	100.0	5.0	10.0	160.0	94.0	120.0
15KP100	15KP100C	100.0	111.0	5.0	10.0	179.0	84.0	134.0
15KP110	15KP110C	110.0	122.0	5.0	10.0	196.0	77.0	147.0
15KP110A	15KP110CA	110.0	122.0	5.0	10.0	178.0	84.0	133.0
15KP120	15KP120C	120.0	133.0	5.0	10.0	214.0	70.0	161.0
15KP130	15KP130C	130.0	144.0	5.0	10.0	231.0	65.0	174.0
15KP150	15KP150C	150.0	167.0	5.0	10.0	268.0	56.0	202.0
15KP160	15KP160C	160.0	178.0	5.0	10.0	287.0	52.0	216.0
15KP170	15KP170C	170.0	189.0	5.0	10.0	304.2	49.0	229.0
15KP180	15KP180C	180.0	200.0	5.0	10.0	321.0	47.0	242.0
15KP200	15KP200C	200.0	222.0	5.0	10.0	356.0	42.0	269.0
15KP220	15KP220C	220.0	245.0	5.0	10.0	393.0	38.0	297.0
15KP240	15KP240C	240.0	267.0	5.0	10.0	428.0	35.0	324.0

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