

5000W Transient Voltage Suppressor



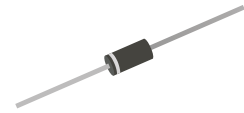
SMD Diodes Specialist

5KP-G Series

Stand-off Voltage: 6.8V ~ 220V

Power Dissipation: 5000 Watts

RoHS Device

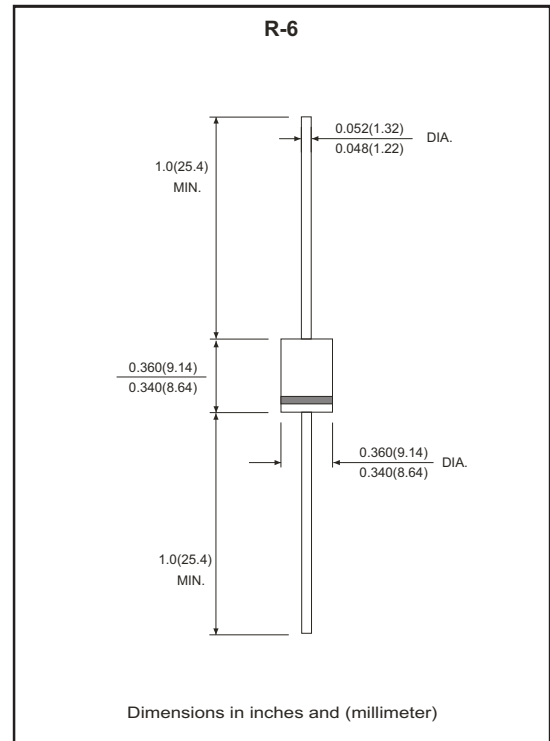


Features

- Glass passivated chip.
- Low leakage.
- Uni and Bidirection unit.
- Excellent clamping capability.
- The plastic material has UL recognition 94V-0.
- Fast response time.

Mechanical Data

- Case: Molded plastic R-6
- Polarity: By cathode band denotes uni-directional device, none cathode band denotes bi-directional device
- Weight: 2.1 grams



Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive loaded.
For capacitive load, derated current by 20%.

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000µs waveform (Note 1)	P _{PP}	5000	W
Peak pulse current with a 10/1000µs waveform (Note 1)	I _{PP}	See Next Table	W
Power dissipation on infinite heatsink at T _L =75 °C	P _D	8.0	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (Note 2)	I _{FSM}	500	A
Maximum instantaneous forward voltage at 100A for uni-directional devices only (Note 3)	V _F	3.5 / 5.0	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

NTOES:

- (1) Non-repetitive current pulse, per fig.5 and derated above T_A=25 °C per fig. 1.
- (2) Measured on 8.3 ms single half sine wave of equivalent square wave,duty cycle=4 pulses per minute maximum.
- (3) V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V

5000W Transient Voltage Suppressor



SMD Diodes Specialist

RATING AND CHARACTERISTIC (5KP-G Series)

Part No.		Absolute Maximum Rating (Ta=25 °C)					Electrical Characteristics (Ta=25 °C)			Marking Code.	
Uni	Bi	V _{RWM}	V _{BR} Min.	V _{BR} Max.	I _T	I _{FSM}	Max. V _C @I _{PPM}		Max. I _R @V _{RWM}	Uni	Bi
		(V)	(V)	(V)	(mA)	(A)@8.3ms	(V)	I _{PPM} (A)	uA		
5KP5.0-G	5KP5.0C-G	5.0	6.40	7.30	10	500	9.6	520.83	800	5KP5.0	5KP5.0C
5KP5.0A-G	5KP5.0CA-G	5.0	6.40	7.00	10	500	9.2	543.48	800	5KP5.0A	5KP5.0CA
5KP6.0-G	5KP6.0C-G	6.0	6.67	8.15	10	500	11.4	438.60	800	5KP6.0	5KP6.0C
5KP6.0A-G	5KP6.0CA-G	6.0	6.67	7.37	10	500	10.3	485.44	800	5KP6.0A	5KP6.0CA
5KP6.5-G	5KP6.5C-G	6.5	7.22	8.82	10	500	12.3	406.50	500	5KP6.5	5KP6.5C
5KP6.5A-G	5KP6.5CA-G	6.5	7.22	7.98	10	500	11.2	446.43	500	5KP6.5A	5KP6.5CA
5KP7.0-G	5KP7.0C-G	7.0	7.78	9.51	10	500	13.3	375.94	200	5KP7.0	5KP7.0C
5KP7.0A-G	5KP7.0CA-G	7.0	7.78	8.60	10	500	12.0	416.67	200	5KP7.0A	5KP7.0CA
5KP7.5-G	5KP7.5C-G	7.5	8.33	10.20	1.0	500	14.3	349.65	100	5KP7.5	5KP7.5C
5KP7.5A-G	5KP7.5CA-G	7.5	8.33	9.21	1.0	500	12.9	387.60	100	5KP7.5A	5KP7.5CA
5KP8.0-G	5KP8.0C-G	8.0	8.89	10.90	1.0	500	15.0	333.33	50	5KP8.0	5KP8.0C
5KP8.0A-G	5KP8.0CA-G	8.0	8.89	9.83	1.0	500	13.6	367.65	50	5KP8.0A	5KP8.0CA
5KP8.5-G	5KP8.5C-G	8.5	9.44	11.50	1.0	500	15.9	314.47	20	5KP8.5	5KP8.5C
5KP8.5A-G	5KP8.5CA-G	8.5	9.44	10.40	1.0	500	14.4	347.22	20	5KP8.5A	5KP8.5CA
5KP9.0-G	5KP9.0C-G	9.0	10.00	12.20	1.0	500	16.9	295.86	10	5KP9.0	5KP9.0C
5KP9.0A-G	5KP9.0CA-G	9.0	10.00	11.10	1.0	500	15.4	324.68	10	5KP9.0A	5KP9.0CA
5KP10-G	5KP10C-G	10.0	11.10	13.60	1.0	500	18.8	265.96	5	5KP10	5KP10C
5KP10A-G	5KP10CA-G	10.0	11.10	12.30	1.0	500	17.0	294.12	5	5KP10A	5KP10CA
5KP11-G	5KP11C-G	11.0	12.20	14.90	1.0	500	20.1	248.76	5	5KP11	5KP11C
5KP11A-G	5KP11CA-G	11.0	12.20	13.50	1.0	500	18.2	274.73	5	5KP11A	5KP11CA
5KP12-G	5KP12C-G	12.0	13.30	16.30	1.0	500	22.0	227.27	5	5KP12	5KP12C
5KP12A-G	5KP12CA-G	12.0	13.30	14.70	1.0	500	19.9	251.26	5	5KP12A	5KP12CA
5KP13-G	5KP13C-G	13.0	14.40	17.60	1.0	500	23.8	210.08	5	5KP13	5KP13C
5KP13A-G	5KP13CA-G	13.0	14.40	15.90	1.0	500	21.5	232.56	5	5KP13A	5KP13CA
5KP14-G	5KP14C-G	14.0	15.60	19.10	1.0	500	25.8	193.80	5	5KP14	5KP14C
5KP14A-G	5KP14CA-G	14.0	15.60	17.20	1.0	500	23.2	215.52	5	5KP14A	5KP14CA
5KP15-G	5KP15C-G	15.0	16.70	20.40	1.0	500	26.9	185.87	5	5KP15	5KP15C
5KP15A-G	5KP15CA-G	15.0	16.70	18.50	1.0	500	24.4	204.92	5	5KP15A	5KP15CA
5KP16-G	5KP16C-G	16.0	17.80	21.80	1.0	500	28.8	173.61	5	5KP16	5KP16C
5KP16A-G	5KP16CA-G	16.0	17.80	19.70	1.0	500	26.0	192.31	5	5KP16A	5KP16CA
5KP17-G	5KP17C-G	17.0	18.90	23.10	1.0	500	30.5	163.93	5	5KP17	5KP17C
5KP17A-G	5KP17CA-G	17.0	18.90	20.90	1.0	500	27.6	181.16	5	5KP17A	5KP17CA
5KP18-G	5KP18C-G	18.0	20.00	24.40	1.0	500	32.2	155.28	5	5KP18	5KP18C
5KP18A-G	5KP18CA-G	18.0	20.00	22.10	1.0	500	29.2	171.23	5	5KP18A	5KP18CA
5KP20-G	5KP20C-G	20.0	22.20	27.10	1.0	500	35.8	139.66	5	5KP20	5KP20C
5KP20A-G	5KP20CA-G	20.0	22.20	24.50	1.0	500	32.4	154.32	5	5KP20A	5KP20CA
5KP22-G	5KP22C-G	22.0	24.40	29.80	1.0	500	39.4	126.90	5	5KP22	5KP22C
5KP22A-G	5KP22CA-G	22.0	24.40	26.90	1.0	500	35.5	140.85	5	5KP22A	5KP22CA
5KP24-G	5KP24C-G	24.0	26.70	32.60	1.0	500	43.0	116.28	5	5KP24	5KP24C
5KP24A-G	5KP24CA-G	24.0	26.70	29.50	1.0	500	38.9	128.53	5	5KP24A	5KP24CA
5KP26-G	5KP26C-G	26.0	28.90	35.30	1.0	500	46.6	107.30	5	5KP26	5KP26C
5KP26A-G	5KP26CA-G	26.0	28.90	31.90	1.0	500	42.1	118.76	5	5KP26A	5KP26CA
5KP28-G	5KP28C-G	28.0	31.10	38.00	1.0	500	50.1	100.00	5	5KP28	5KP28C
5KP28A-G	5KP28CA-G	28.0	31.10	34.40	1.0	500	45.4	110.13	5	5KP28A	5KP28CA

REV:B

5000W Transient Voltage Suppressor



SMD Diodes Specialist

RATING AND CHARACTERISTIC (5KP-G Series)

Part No.		Absolute Maximum Rating (Ta=25 °C)					Electrical Characteristics (Ta=25 °C)			Marking Code.	
Uni	Bi	V _{VRM}	V _{BR} Min.	V _{BR} Max.	I _T	I _{FSM}	Max. V _C @I _{PPM}		Max. I _R @V _{WM}	Uni	Bi
		(V)	(V)	(V)	(mA)	(A)@8.3ms	(V)	I _{PPM} (A)	uA		
5KP30-G	5KP30C-G	30.0	33.30	40.70	1.0	500	53.5	93.46	5	5KP30	5KP30C
5KP30A-G	5KP30CA-G	30.0	33.30	36.80	1.0	500	48.4	103.31	5	5KP30A	5KP30CA
5KP33-G	5KP33C-G	33.0	36.70	44.90	1.0	500	59.0	84.75	5	5KP33	5KP33C
5KP33A-G	5KP33CA-G	33.0	36.70	40.60	1.0	500	53.3	93.81	5	5KP33A	5KP33CA
5KP36-G	5KP36C-G	36.0	40.00	48.90	1.0	500	64.3	77.76	5	5KP36	5KP36C
5KP36A-G	5KP36CA-G	36.0	40.00	44.20	1.0	500	58.1	86.06	5	5KP36A	5KP36CA
5KP40-G	5KP40C-G	40.0	44.40	54.30	1.0	500	71.4	70.03	5	5KP40	5KP40C
5KP40A-G	5KP40CA-G	40.0	44.40	49.10	1.0	500	64.5	77.52	5	5KP40A	5KP40CA
5KP43-G	5KP43C-G	43.0	47.80	58.40	1.0	500	76.7	65.19	5	5KP43	5KP43C
5KP43A-G	5KP43CA-G	43.0	47.80	52.80	1.0	500	69.4	72.05	5	5KP43A	5KP43CA
5KP45-G	5KP45C-G	45.0	50.00	61.10	1.0	500	80.3	62.27	5	5KP45	5KP45C
5KP45A-G	5KP45CA-G	45.0	50.00	55.30	1.0	500	72.7	68.78	5	5KP45A	5KP45CA
5KP48-G	5KP48C-G	48.0	53.30	65.10	1.0	500	85.5	58.48	5	5KP48	5KP48C
5KP48A-G	5KP48CA-G	48.0	53.30	58.90	1.0	500	77.4	64.60	5	5KP48A	5KP48CA
5KP51-G	5KP51C-G	51.0	56.70	69.30	1.0	500	91.1	54.88	5	5KP51	5KP51C
5KP51A-G	5KP51CA-G	51.0	56.70	62.70	1.0	500	82.4	60.68	5	5KP51A	5KP51CA
5KP54-G	5KP54C-G	54.0	60.00	73.30	1.0	500	96.3	51.92	5	5KP54	5KP54C
5KP54A-G	5KP54CA-G	54.0	60.00	66.30	1.0	500	87.1	57.41	5	5KP54A	5KP54CA
5KP58-G	5KP58C-G	58.0	64.40	78.70	1.0	500	103.0	48.54	5	5KP58	5KP58C
5KP58A-G	5KP58CA-G	58.0	64.40	71.20	1.0	500	93.6	53.42	5	5KP58A	5KP58CA
5KP60-G	5KP60C-G	60.0	66.70	81.50	1.0	500	107.0	46.73	5	5KP60	5KP60C
5KP60A-G	5KP60CA-G	60.0	66.70	73.70	1.0	500	96.8	51.65	5	5KP60A	5KP60CA
5KP64-G	5KP64C-G	64.0	71.10	86.90	1.0	500	114.0	43.86	5	5KP64	5KP64C
5KP64A-G	5KP64CA-G	64.0	71.10	78.60	1.0	500	103.0	48.54	5	5KP64A	5KP64CA
5KP70-G	5KP70C-G	70.0	77.80	95.10	1.0	500	125.0	40.00	5	5KP70	5KP70C
5KP70A-G	5KP70CA-G	70.0	77.80	86.00	1.0	500	113.0	44.25	5	5KP70A	5KP70CA
5KP75-G	5KP75C-G	75.0	83.30	102.00	1.0	500	134.0	37.31	5	5KP75	5KP75C
5KP75A-G	5KP75CA-G	75.0	83.30	92.10	1.0	500	121.0	41.32	5	5KP75A	5KP75CA
5KP78-G	5KP78C-G	78.0	86.70	106.00	1.0	500	139.0	35.97	5	5KP78	5KP78C
5KP78A-G	5KP78CA-G	78.0	86.70	95.80	1.0	500	126.0	39.68	5	5KP78A	5KP78CA
5KP85-G	5KP85C-G	85.0	94.40	115.00	1.0	500	151.0	33.11	5	5KP85	5KP85C
5KP85A-G	5KP85CA-G	85.0	94.40	104.00	1.0	500	137.0	36.50	5	5KP85A	5KP85CA
5KP90-G	5KP90C-G	90.0	100.00	122.00	1.0	500	160.0	31.25	5	5KP90	5KP90C
5KP90A-G	5KP90CA-G	90.0	100.00	111.00	1.0	500	146.0	34.25	5	5KP90A	5KP90CA
5KP100-G	5KP100C-G	100.0	111.00	136.00	1.0	500	179.0	27.93	5	5KP100	5KP100C
5KP100A-G	5KP100CA-G	100.0	111.00	123.00	1.0	500	162.0	30.86	5	5KP100A	5KP100CA
5KP110-G	5KP110C-G	110.0	122.00	149.00	1.0	500	196.0	25.51	5	5KP110	5KP110C
5KP110A-G	5KP110CA-G	110.0	122.00	135.00	1.0	500	177.0	28.25	5	5KP110A	5KP110CA
5KP120-G	5KP120C-G	120.0	133.00	163.00	1.0	500	214.0	23.36	5	5KP120	5KP120C
5KP120A-G	5KP120CA-G	120.0	133.00	147.00	1.0	500	193.0	25.91	5	5KP120A	5KP120CA
5KP130-G	5KP130C-G	130.0	144.00	176.00	1.0	500	230.0	21.65	5	5KP130	5KP130C
5KP130A-G	5KP130CA-G	130.0	144.00	159.00	1.0	500	209.0	23.92	5	5KP130A	5KP130CA
5KP150-G	5KP150C-G	150.0	167.00	204.00	1.0	500	268.0	18.66	5	5KP150	5KP150C
5KP150A-G	5KP150CA-G	150.0	167.00	185.00	1.0	500	243.0	20.58	5	5KP150A	5KP150CA

REV:B

5000W Transient Voltage Suppressor



SMD Diodes Specialist

RATING AND CHARACTERISTIC (5KP-G Series)

Part No.		Absolute Maximum Rating (Ta=25 °C)					Electrical Characteristics (Ta=25 °C)			Marking Code.	
Uni	Bi	V _{RWM}	V _{BR} Min.	V _{BR} Max.	I _T	I _{FSM}	Max. V _C @I _{PPM}		Max. I _R @V _{RWM}	Uni	Bi
		(V)	(V)	(V)	(mA)	(A)@8.3mS	(V)	I _{PPM} (A)	uA		
5KP160-G	5KP160C-G	160.0	178.00	218.00	1.0	500	287.0	17.42	5	5KP160	5KP160C
5KP160A-G	5KP160CA-G	160.0	178.00	197.00	1.0	500	259.0	19.31	5	5KP160A	5KP160CA
5KP170-G	5KP170C-G	170.0	189.00	231.00	1.0	500	304.0	16.45	5	5KP170	5KP170C
5KP170A-G	5KP170CA-G	170.0	189.00	209.00	1.0	500	275.0	18.18	5	5KP170A	5KP170CA
5KP180-G	5KP180C-G	180.0	200.16	244.80	1.0	500	322.2	15.52	5	5KP180	5KP180C
5KP180A-G	5KP180CA-G	180.0	200.00	220.00	1.0	500	291.6	17.15	5	5KP180A	5KP180CA
5KP190-G	5KP190C-G	190.0	211.28	258.40	1.0	500	340.1	14.70	5	5KP190	5KP190C
5KP190A-G	5KP190CA-G	190.0	211.00	232.00	1.0	500	307.8	16.24	5	5KP190A	5KP190CA

NOTES:

1. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device
2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices
3. For Bi-Directional devices having V_R of 10 Volts and under, the I_R Limit is double

RATING AND CHARACTERISTIC (5KP-G Series)

Fig.1 Pulse Derating Curve

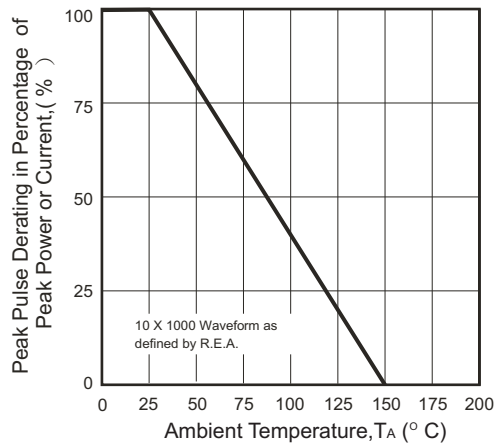


Fig.2 Maximum Non-Repetitive Surge Current

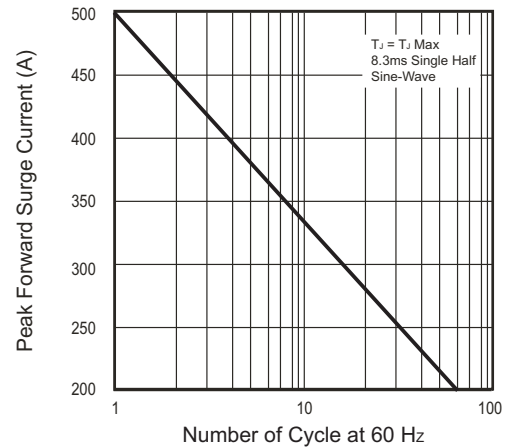


Fig.3 Steady State Power Derating Curve

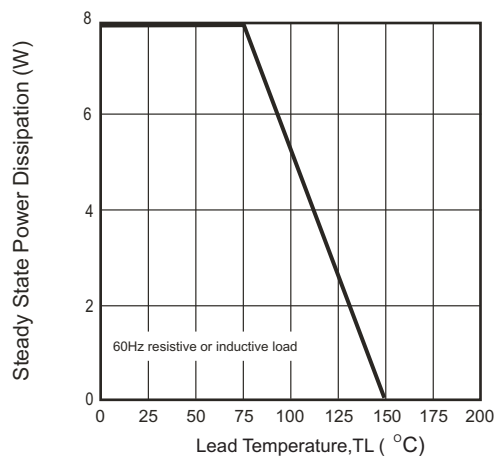


Fig.4 Peak Pulse Power Rating Curve

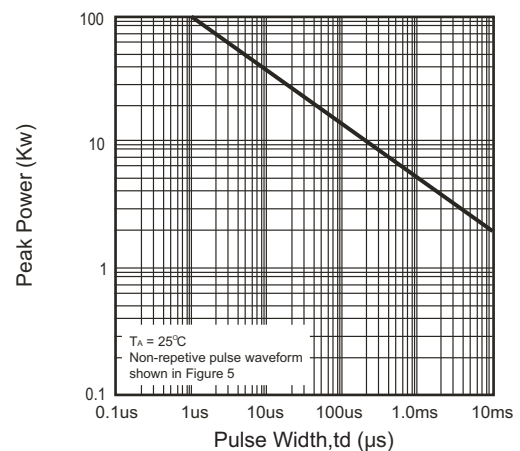


Fig.5 Pulse Waveform

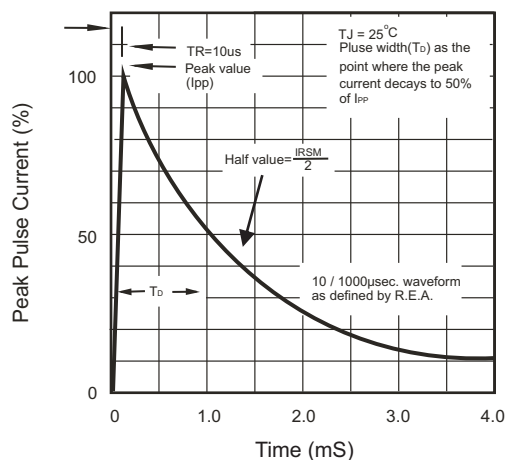
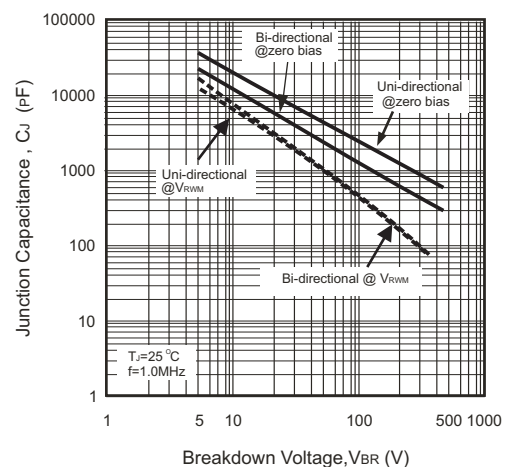


Fig.4 Typical Junction Capacitance



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Comchip Technology:

[5KP12CA-G](#) [5KP24CA-G](#) [5KP15CA-G](#) [5KP6.5A-G](#) [5KP36A-G](#) [5KP180CA-G](#) [5KP120A-G](#) [5KP75CA-G](#) [5KP85A-G](#) [5KP150A-G](#) [5KP5.0A-G](#) [5KP51CA-G](#) [5KP28A-G](#) [5KP8.0A-G](#) [5KP58A-G](#) [5KP60CA-G](#) [5KP13A-G](#) [5KP40CA-G](#) [5KP7.0A-G](#) [5KP28CA-G](#) [5KP64A-G](#) [5KP190A-G](#) [5KP36CA-G](#) [5KP18A-G](#) [5KP43A-G](#) [5KP130A-G](#) [5KP160A-G](#) [5KP10A-G](#) [5KP26A-G](#) [5KP8.0CA-G](#) [5KP58CA-G](#) [5KP16CA-G](#) [5KP17A-G](#) [5KP43CA-G](#) [5KP33A-G](#) [5KP13CA-G](#) [5KP190CA-G](#) [5KP45CA-G](#) [5KP22A-G](#) [5KP78CA-G](#) [5KP10CA-G](#) [5KP64CA-G](#) [5KP130CA-G](#) [5KP6.5CA-G](#) [5KP48A-G](#) [5KP170A-G](#) [5KP8.5A-G](#) [5KP14A-G](#) [5KP90CA-G](#) [5KP11A-G](#) [5KP7.5A-G](#) [5KP22CA-G](#) [5KP9.0CA-G](#) [5KP70A-G](#) [5KP120CA-G](#) [5KP150CA-G](#) [5KP85CA-G](#) [5KP48CA-G](#) [5KP11CA-G](#) [5KP170CA-G](#) [5KP17CA-G](#) [5KP110A-G](#) [5KP100CA-G](#) [5KP30CA-G](#) [5KP6.0CA-G](#) [5KP24A-G](#) [5KP45A-G](#) [5KP7.5CA-G](#) [5KP54A-G](#) [5KP51A-G](#) [5KP75A-G](#) [5KP7.0CA-G](#) [5KP60A-G](#) [5KP26CA-G](#) [5KP9.0A-G](#) [5KP180A-G](#) [5KP20A-G](#) [5KP30A-G](#) [5KP160CA-G](#) [5KP12A-G](#) [5KP5.0CA-G](#) [5KP33A-HF](#) [5KP14CA-G](#) [5KP18CA-G](#) [5KP15A-G](#) [5KP16A-G](#) [5KP8.5CA-G](#) [5KP90A-G](#) [5KP78A-G](#) [5KP100A-G](#) [5KP110CA-G](#) [5KP54CA-G](#) [5KP70CA-G](#) [5KP6.0A-G](#) [5KP20CA-G](#) [5KP33CA-G](#) [5KP40A-G](#)