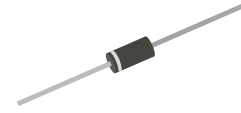


## A5KP-G Series

Stand-off Voltage: 6.8V ~ 440V

Power Dissipation: 5000 Watts

RoHS Device

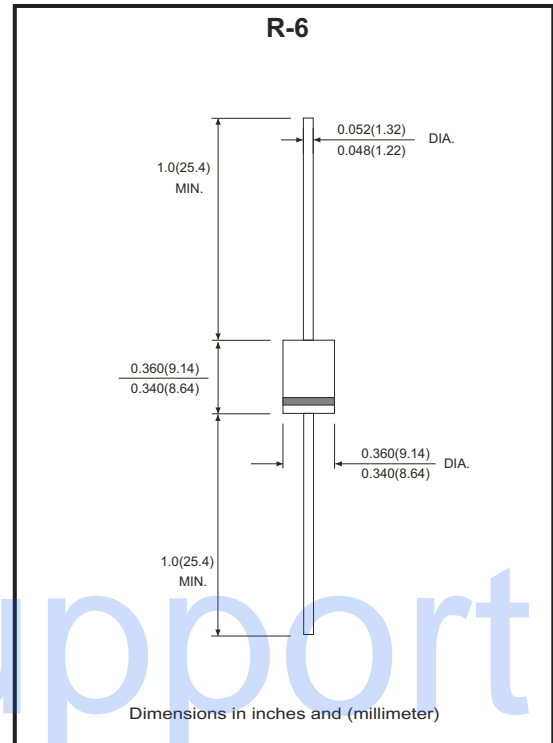


### Features

- Glass passivated chip.
- Low leakage.
- Uni and Bidirection unit.
- Excellent clamping capability.
- The plastic material has UL recognition 94V-0.
- Very fast response time.
- Comply with AEC-Q101

### Mechanical Data

- Case: Molded plastic R-6
- Lead: Solderable per MIL-STD-202, method 208 guaranteed.
- Polarity: Color band denotes cathode end except Bipolar.
- Mounting position: Any
- 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 <sub>PP</sub>	5000	W
Peak pulse current with a 10/1000µs waveform (Note 1)	I <sub>PP</sub>	See Next Table	W
Power dissipation on infinite heatsink at T <sub>L</sub> =75°C	P <sub>D</sub>	8.0	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (Note 2)	I <sub>FSM</sub>	500	A
Maximum instantaneous forward voltage at 100A for uni-directional devices only (Note 3)	V <sub>F</sub>	3.5 / 5.0	V
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

NTOES:

(1) Non-repetitive current pulse, per fig.5 and derated above T<sub>A</sub>=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<sub>F</sub><3.5V for devices of V<sub>BR</sub><200V and V<sub>F</sub><5.0V for devices of V<sub>BR</sub>>201V

## RATING AND CHARACTERISTIC (A5KP-G Series)

Fig.1- Pulse Derating Curve

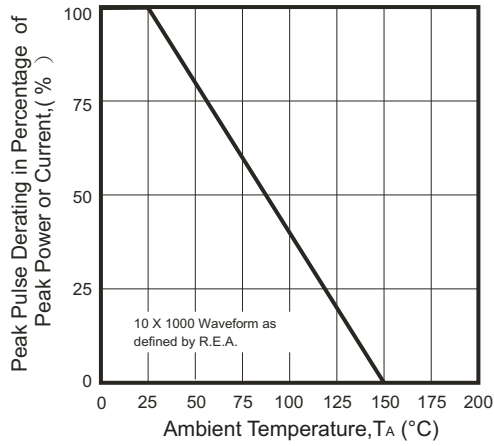


Fig.2- Maximum Non-Repetitive Surge Current

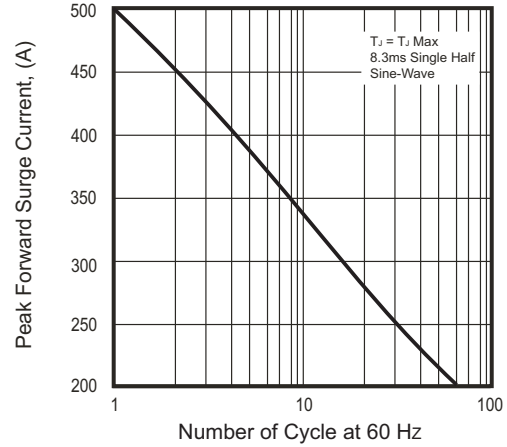


Fig.3- Steady State Power Derating Curve

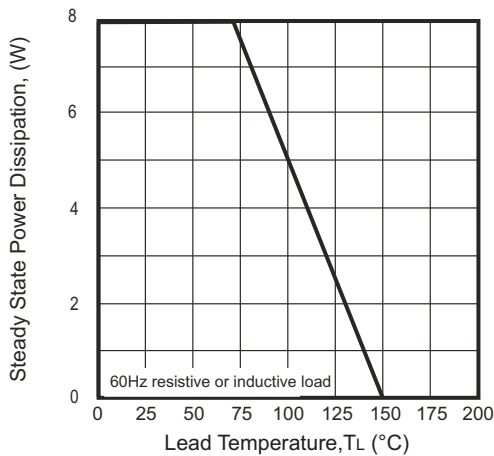


Fig.4- Peak Pulse Power Rating Curve

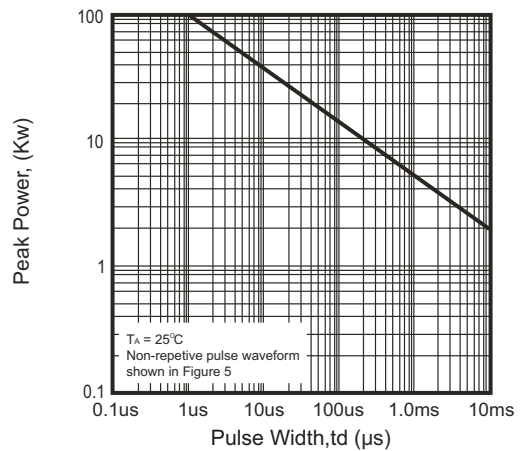


Fig.5- Pulse Waveform

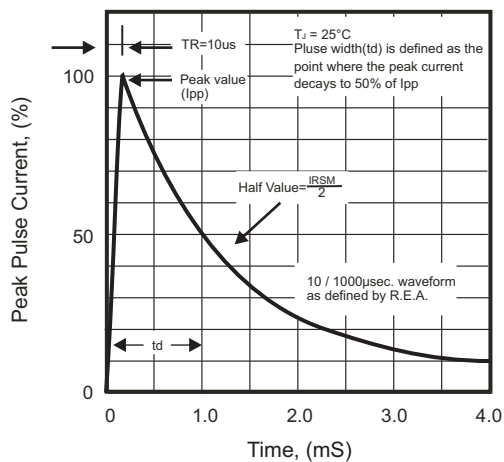
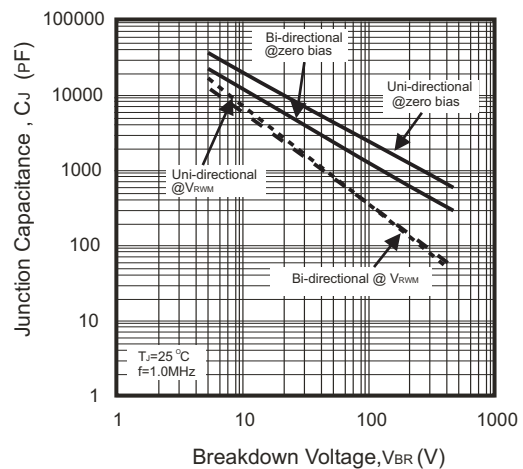


Fig.4- Typical Junction Capacitance



# 5000W Transient Voltage Suppressor



## RATING AND CHARACTERISTIC (A5KP-G Series)

Part No.		Absolute Maximum Rating (Ta=25°C)					Electrical Characteristics (Ta=25°C)			Marking Code.	
Uni	Bi	V <sub>RWM</sub>	V <sub>BR</sub> Min.	V <sub>BR</sub> Max.	I <sub>T</sub>	I <sub>FSM</sub>	Max. Vc @I <sub>PPM</sub>		Max. Ir @V <sub>RWM</sub>	Uni	Bi
		(V)	(V)	(V)	(mA)	(A)@8.3ms	(V)	I <sub>PPM</sub> (A)	uA		
A5KP5.0A-G	A5KP5.0CA-G	5.0	6.40	7.00	50	500	9.2	543.48	5000	5KP5.0A	5KP5.0CA
A5KP6.0A-G	A5KP6.0CA-G	6.0	6.67	7.37	50	500	10.3	485.44	5000	5KP6.0A	5KP6.0CA
A5KP6.5A-G	A5KP6.5CA-G	7.0	7.22	7.98	50	500	11.2	446.43	2000	5KP6.5A	5KP6.5CA
A5KP7.0A-G	A5KP7.0CA-G	7.0	7.78	8.60	50	500	12.0	416.67	1000	5KP7.0A	5KP7.0CA
A5KP7.5A-G	A5KP7.5CA-G	8.0	8.33	9.21	5	500	12.9	387.60	250	5KP7.5A	5KP7.5CA
A5KP8.0A-G	A5KP8.0CA-G	8.0	8.89	9.83	5	500	13.6	367.65	150	5KP8.0A	5KP8.0CA
A5KP8.5A-G	A5KP8.5CA-G	9.0	9.44	10.40	5	500	14.4	347.22	50	5KP8.5A	5KP8.5CA
A5KP9.0A-G	A5KP9.0CA-G	9.0	10.00	11.10	5	500	15.4	324.68	20	5KP9.0A	5KP9.0CA
A5KP10A-G	A5KP10CA-G	10.0	11.10	12.30	5	500	17.0	294.12	15	5KP10A	5KP10CA
A5KP11A-G	A5KP11CA-G	11.0	12.20	13.50	5	500	18.2	274.73	2	5KP11A	5KP11CA
A5KP12A-G	A5KP12CA-G	12.0	13.30	14.70	5	500	19.9	251.26	2	5KP12A	5KP12CA
A5KP13A-G	A5KP13CA-G	13.0	14.40	15.90	5	500	21.5	232.56	2	5KP13A	5KP13CA
A5KP14A-G	A5KP14CA-G	14.0	15.60	17.20	5	500	23.2	215.52	2	5KP14A	5KP14CA
A5KP15A-G	A5KP15CA-G	15.0	16.70	18.50	5	500	24.4	204.92	2	5KP15A	5KP15CA
A5KP16A-G	A5KP16CA-G	16.0	17.80	19.70	5	500	26.0	192.31	2	5KP16A	5KP16CA
A5KP17A-G	A5KP17CA-G	17.0	18.90	20.90	5	500	27.6	181.16	2	5KP17A	5KP17CA
A5KP18A-G	A5KP18CA-G	18.0	20.00	22.10	5	500	29.2	171.23	2	5KP18A	5KP18CA
A5KP19A-G	A5KP19CA-G	19.0	21.10	23.30	5	500	30.8	162.44	2	5KP19A	5KP19CA
A5KP20A-G	A5KP20CA-G	20.0	22.20	24.5	5	500	32.4	154.32	2	5KP20A	5KP20CA
A5KP22A-G	A5KP22CA-G	22.0	24.40	26.90	5	500	35.5	140.85	2	5KP22A	5KP22CA
A5KP24A-G	A5KP24CA-G	24.0	26.70	29.50	5	500	38.9	128.53	2	5KP24A	5KP24CA
A5KP26A-G	A5KP26CA-G	26.0	28.90	31.90	5	500	42.1	118.76	2	5KP26A	5KP26CA
A5KP28A-G	A5KP28CA-G	28.0	31.10	34.40	5	500	45.4	110.13	2	5KP28A	5KP28CA
A5KP30A-G	A5KP30CA-G	30.0	33.30	36.80	5	500	48.4	103.31	2	5KP30A	5KP30CA
A5KP33A-G	A5KP33CA-G	33.0	36.70	40.60	5	500	53.3	93.81	2	5KP33A	5KP33CA
A5KP36A-G	A5KP36CA-G	36.0	40.00	44.20	5	500	58.1	86.06	2	5KP36A	5KP36CA
A5KP40A-G	A5KP40CA-G	40.0	44.40	49.10	5	500	64.5	77.52	2	5KP40A	5KP40CA
A5KP43A-G	A5KP43CA-G	43.0	47.80	52.80	5	500	69.4	72.05	2	5KP43A	5KP43CA
A5KP45A-G	A5KP45CA-G	45.0	50.00	55.30	5	500	72.7	68.78	2	5KP45A	5KP45CA
A5KP48A-G	A5KP48CA-G	48.0	53.30	58.90	5	500	77.4	64.60	2	5KP48A	5KP48CA
A5KP51A-G	A5KP51CA-G	51.0	56.70	62.70	5	500	82.4	60.68	2	5KP51A	5KP51CA
A5KP54A-G	A5KP54CA-G	54.0	60.00	66.30	5	500	87.1	57.41	2	5KP54A	5KP54CA
A5KP58A-G	A5KP58CA-G	58.0	64.40	71.20	5	500	93.6	53.42	2	5KP58A	5KP58CA
A5KP60A-G	A5KP60CA-G	60.0	66.70	73.70	5	500	96.8	51.65	2	5KP60A	5KP60CA
A5KP64A-G	A5KP64CA-G	64.0	71.10	78.60	5	500	103.0	48.54	2	5KP64A	5KP64CA
A5KP70A-G	A5KP70CA-G	70.0	77.80	86.00	5	500	113.0	44.25	2	5KP70A	5KP70CA
A5KP75A-G	A5KP75CA-G	75.0	83.30	92.10	5	500	121.0	41.32	2	5KP75A	5KP75CA
A5KP78A-G	A5KP78CA-G	78.0	86.70	95.80	5	500	126.0	39.68	2	5KP78A	5KP78CA
A5KP80A-G	A5KP80CA-G	80.0	88.80	97.60	5	500	129.6	38.58	2	5KP80A	5KP80CA
A5KP85A-G	A5KP85CA-G	85.0	94.40	104.00	5	500	137.0	36.50	2	5KP85A	5KP85CA

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

# 5000W Transient Voltage Suppressor

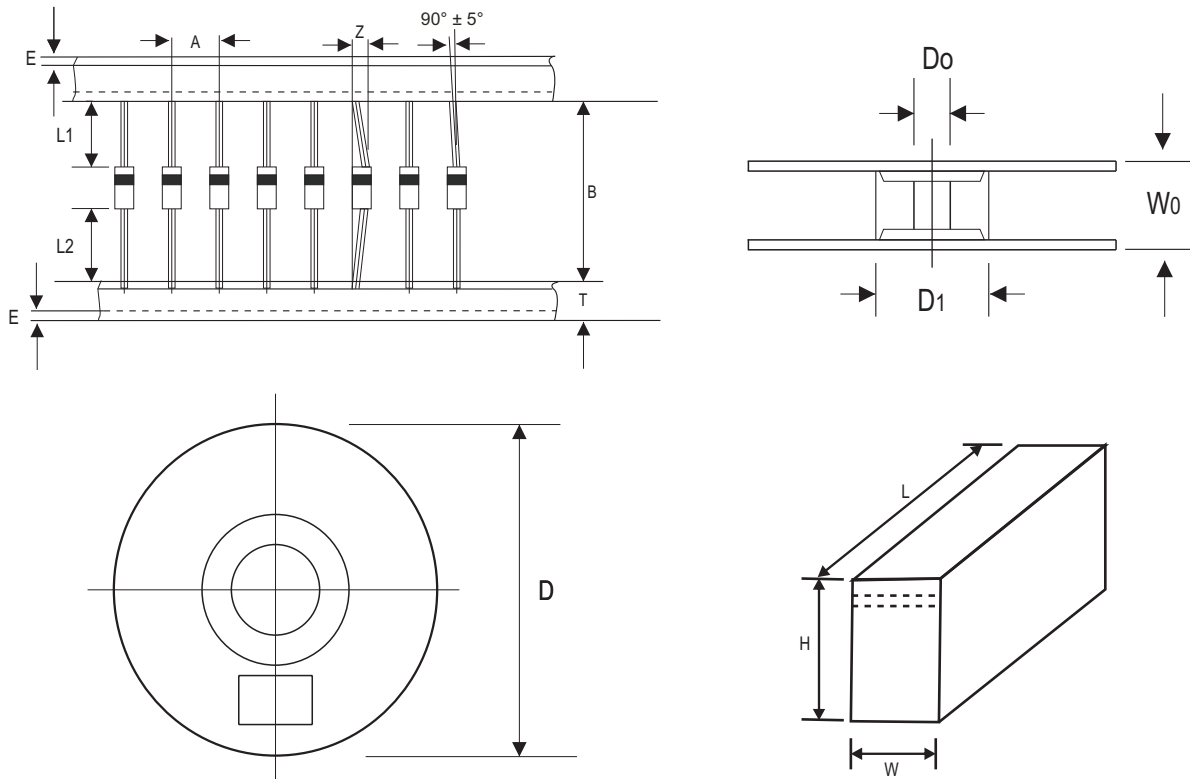
## RATING AND CHARACTERISTIC (A5KP-G Series)

Part No.		Absolute Maximum Rating (Ta=25°C)					Electrical Characteristics (Ta=25°C)			Marking Code.	
Uni	Bi	V <sub>RWM</sub>	V <sub>BR</sub> Min.	V <sub>BR</sub> Max.	I <sub>T</sub>	I <sub>FSM</sub>	Max. V <sub>C</sub> @I <sub>PPM</sub>		Max. I <sub>R</sub> @V <sub>RWM</sub>	Uni	Bi
		(V)	(V)	(V)	(mA)	(A)@8.3mS	(V)	I <sub>PPM</sub> (A)	uA		
A5KP90A-G	A5KP90CA-G	90.0	100.00	111.00	5	500	146.0	34.25	2	5KP90A	5KP90CA
A5KP100A-G	A5KP100CA-G	100.0	111.00	123.00	5	500	162.0	30.86	2	5KP100A	5KP100CA
A5KP110A-G	A5KP110CA-G	110.0	122.00	135.00	5	500	177.0	28.25	2	5KP110A	5KP110CA
A5KP120A-G	A5KP120CA-G	120.0	133.00	147.00	5	500	193.0	25.91	2	5KP120A	5KP120CA
A5KP130A-G	A5KP130CA-G	130.0	144.00	159.00	5	500	209.0	23.92	2	5KP130A	5KP130CA
A5KP140A-G	A5KP140CA-G	140.0	155.00	171.00	5	500	226.8	22.05	2	5KP140A	5KP140CA
A5KP150A-G	A5KP150CA-G	150.0	167.00	185.00	5	500	243.0	20.58	2	5KP150A	5KP150CA
A5KP160A-G	A5KP160CA-G	160.0	178.00	197.00	5	500	259.0	19.31	2	5KP160A	5KP160CA
A5KP170A-G	A5KP170CA-G	170.0	189.00	209.00	5	500	275.0	18.18	2	5KP170A	5KP170CA
A5KP180A-G	A5KP180CA-G	180.0	200.00	220.00	5	500	291.6	17.15	2	5KP180A	5KP180CA
A5KP190A-G	A5KP190CA-G	190.0	211.00	232.00	5	500	307.8	16.24	2	5KP190A	5KP190CA
A5KP200A-G	A5KP200CA-G	200.0	224.00	247.00	5	500	324.0	15.43	2	5KP200A	5KP200CA
A5KP210A-G	A5KP210CA-G	210.0	233.00	258.00	5	500	349.5	42.10	2	5KP210A	5KP210CA
A5KP220A-G	A5KP220CA-G	220.0	246.00	272.00	5	500	356.0	50.00	2	5KP220A	5KP220CA
A5KP250A-G	A5KP250CA-G	250.0	279.00	309.00	5	500	405.0	45.40	2	5KP250A	5KP250CA
A5KP300A-G	A5KP300CA-G	300.0	335.00	371.00	5	500	486.0	53.50	2	5KP300A	5KP300CA
A5KP350A-G	A5KP350CA-G	350.0	391.00	432.00	5	500	567.0	48.4	2	5KP350A	5KP350CA
A5KP400A-G	A5KP400CA-G	400.0	447.00	494.00	5	500	648.0	7.72	2	5KP400A	5KP400CA
A5KP440A-G	A5KP440CA-G	440.0	492.00	543.00	5	500	713.0	7.01	2	5KP440A	5KP440CA

NOTES:

1. Suffix 'A' denotes 5% tolerance device.
2. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having V<sub>R</sub> of 10 Volts and under, the I<sub>R</sub> Limit is double.

## Taping Specification For Axial Lead Diodes



R-6	SYMBOL	A	B	Z	T	E	L1	L2
	(mm)	$10.00 \pm 0.50$	$52.00 \pm 0.50$	1.20 (max)	$6.00 \pm 0.40$	1.00 (max)	1.00 (max)	1.00 (max)
	(inch)	$0.394 \pm 0.020$	$2.047 \pm 0.020$	0.047 (max)	$0.236 \pm 0.016$	0.039 (max)	0.039 (max)	0.039 (max)

R-6	SYMBOL	D1	D0	D	W0	L	W	H
	(mm)	$85.70 \pm 0.30$	$16.60 \pm 0.40$	330.00	$72.00 \pm 3.00$	260.00	75.00	145.00
	(inch)	$3.374 \pm 0.012$	$0.654 \pm 0.016$	13.000	$2.835 \pm 0.118$	10.236	2.953	5.709

## Standard Packaging

Case Type	AMMO PACK	
	BOX ( pcs )	CARTON ( pcs )
R-6	250	3,750

# Mouser Electronics

Authorized Distributor

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## Comchip Technology:

[A5KP14CA-G](#) [A5KP15CA-G](#) [A5KP60A-G](#) [A5KP19A-G](#) [A5KP150CA-G](#) [A5KP51CA-G](#) [A5KP13A-G](#) [A5KP11A-G](#)  
[A5KP10CA-G](#) [A5KP45A-G](#) [A5KP190A-G](#) [A5KP6.0CA-G](#) [A5KP90A-G](#) [A5KP28A-G](#) [A5KP7.0A-G](#) [A5KP250CA-G](#)  
[A5KP100A-G](#) [A5KP140CA-G](#) [A5KP8.5CA-G](#) [A5KP190CA-G](#) [A5KP120CA-G](#) [A5KP75CA-G](#) [A5KP200A-G](#)  
[A5KP43CA-G](#) [A5KP400CA-G](#) [A5KP220A-G](#) [A5KP70A-G](#) [A5KP78A-G](#) [A5KP200CA-G](#) [A5KP7.0CA-G](#) [A5KP75A-G](#)  
[A5KP78CA-G](#) [A5KP160CA-G](#) [A5KP8.5A-G](#) [A5KP10A-G](#) [A5KP20A-G](#) [A5KP6.0A-G](#) [A5KP54CA-G](#) [A5KP33A-G](#)  
[A5KP210CA-G](#) [A5KP19CA-G](#) [A5KP300CA-G](#) [A5KP48A-G](#) [A5KP43A-G](#) [A5KP14A-G](#) [A5KP51A-G](#) [A5KP350CA-G](#)  
[A5KP5.0CA-G](#) [A5KP15A-G](#) [A5KP180CA-G](#) [A5KP140A-G](#) [A5KP48CA-G](#) [A5KP16CA-G](#) [A5KP250A-G](#) [A5KP36A-G](#)  
[A5KP7.5CA-G](#) [A5KP180A-G](#) [A5KP36CA-G](#) [A5KP16A-G](#) [A5KP40CA-G](#) [A5KP64A-G](#) [A5KP22A-G](#) [A5KP60CA-G](#)  
[A5KP12A-G](#) [A5KP210A-G](#) [A5KP110CA-G](#) [A5KP18A-G](#) [A5KP45CA-G](#) [A5KP33CA-G](#) [A5KP17A-G](#) [A5KP170CA-G](#)  
[A5KP11CA-G](#) [A5KP85CA-G](#) [A5KP440CA-G](#) [A5KP70CA-G](#) [A5KP28CA-G](#) [A5KP150A-G](#) [A5KP5.0A-G](#) [A5KP400A-G](#)  
[A5KP58CA-G](#) [A5KP120A-G](#) [A5KP6.5CA-G](#) [A5KP22CA-G](#) [A5KP6.5A-G](#) [A5KP110A-G](#) [A5KP130CA-G](#)  
[A5KP9.0CA-G](#) [A5KP17CA-G](#) [A5KP64CA-G](#) [A5KP170A-G](#) [A5KP18CA-G](#) [A5KP8.0CA-G](#) [A5KP12CA-G](#) [A5KP40A-G](#)  
[A5KP90CA-G](#) [A5KP54A-G](#) [A5KP100CA-G](#) [A5KP26CA-G](#) [A5KP80CA-G](#) [A5KP8.0A-G](#)