

## K SERIES NON-FLAMMABLE WIRE WOUND FIXED RESISTORS

### GENERAL SPECIFICATIONS

Model	Power Rating[W]	Resistance Range [OHM]	
		Standard	S type
KH	5	1.0-5K	1K
	10	1.0-10K	2K
	15	1.0-15K	3K
	20	1.0-20K	4K
	30	1.5-30K	4K
KHIS	40	2.0-40K	6K
	50	2.0-50K	8K
	60	1.5-60K	12K
KG	80	2.0-80K	15K
	100	2.5-100K	20K
	120	3.0-120K	25K
KZG	150	4.0-150K	30K
	200	5.0-200K	40K
	300	8.0-200K	60K
KHZ	400	10.0-300K	80K
	500	10.0-400K	90K
	600	10.0-500K	100K
	700	10.0-600K	110K
	1000	10.0-900K	120K
	1200	10.0-1100K	130K

**Tolerance**

1ohm less than or equal to R: +-5%[J]

1ohm greater than R: +-10%[K]

### CHARACTERISTICS

Values in [ ] mean change in ohmic value after test

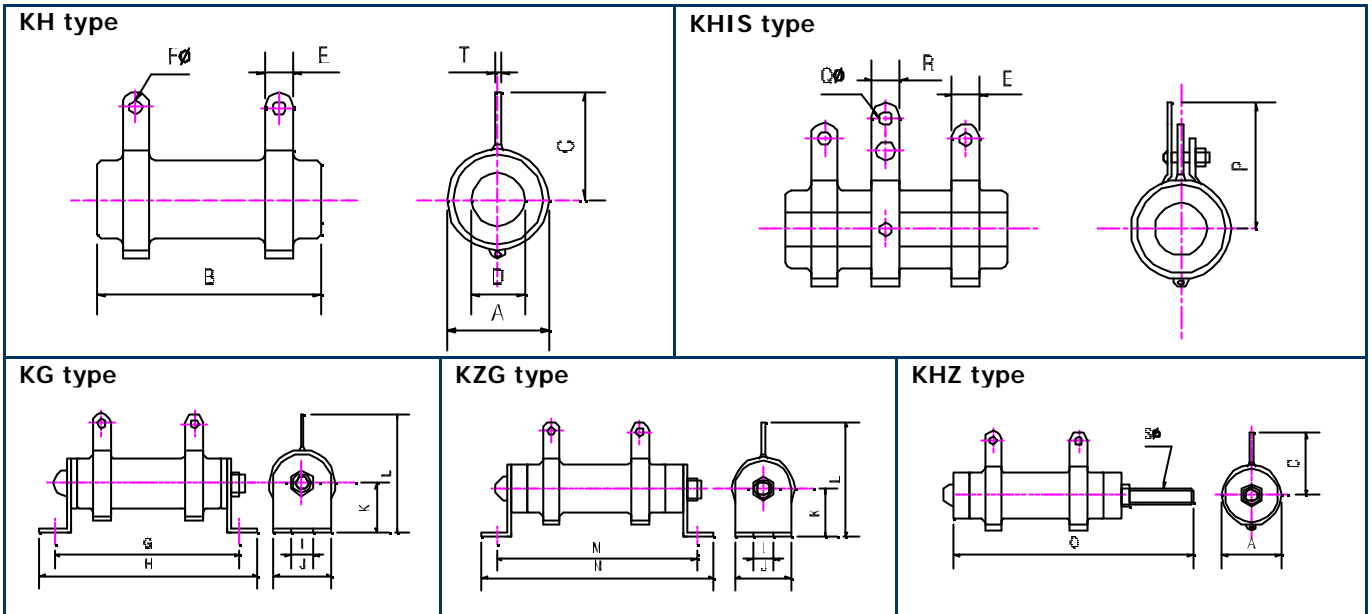
Temp. Coefficient	+-200ppm/C max.	
Power Rating Load	Change in R/R = +- [1%+0.05OHM]	350C max.
Short Time Overload	Change in R/R = +- [2%+0.05OHM]	1000% rated power 5 secs
Insulation Resistance	100MOHM min. DC 500V	
Dielectric Withstanding V.	KG, KH : AC 1500V 1 min., KHZ, KZG : AC 3000V 1 min.	
Terminal Strength	5-20W : 4.5kgf, H20-40W : 6kgf, 60-200W : 8kgf, 300-400W : 10kgf-30secs	
Resistors Strength	5W-40W: 20kgf, 60W-400W : 30kgf-30secs	
Vibration	Mount : KG type, 1.5mm 10-55Hz/1min.X,Y,Z 2 hours.	
Solderability	75% coverage min. 270C 5 secs.	
Heat Resistance	350C 2 hrs	
Thermal Shock	Change in R/R = +- [2%+0.05OHM]	Power rating load -30min. -55C-15min.
Humidity (Steady state)	Change in R/R = +- [2%+0.05OHM, 10MOHM min.]	40C, 95%RH, 500 hrs.
Load Life in Humidity	Change in R/R = +- [2%+0.05OHM]	0.1XP rating, 90 min. ON, 30 min OFF, 40C, 95%RH, 500hrs.
Load Life	Change in R/R = +- [5%+0.05OHM]	Power rating, 90 min. ON, 30min OFF, 500hrs.
Flame Retardancy	100-600% rated power load	

\*Note: Applied voltage- AC RMS voltage

### PERCENTAGE POWER DECREASE IN GROUPED APPLICATIONS

Interval	State	2EA	3EA	4EA	5EA	6EA	7EA	8EA	9EA	10EA	11EA	12EA
40mm	Open	63	56	51	47	45	43	40	38	36	34	32
	Close	54	47	43	41	38	36	34	32	31	29	27
45mm	Open	70	64	60	56	53	50	48	46	44	42	40
	Close	60	54	51	47	45	42	41	39	37	36	34
50mm	Open	73	68	64	60	58	56	55	54	52	50	49
	Close	62	58	54	51	49	47	46	45	44	43	42
55mm	Open	77	70	67	64	63	60	59	58	57	56	56
	Close	65	59	57	54	53	51	50	49	48	47	47
75mm	Open	82	76	72	68	66	65	64	63	62	61	60
	Close	70	64	61	58	56	55	54	53	52	51	50

**DIMENSIONS**



Model	Power Rating [w]	Dimensions [mm]																			
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	T	S
KH	5	11	30	16	4.5	4.5	2.3	43	61	4.1	11	12	29	48	57	48	22	3.0	5.0	0.4	3
	10	11	45	16	4.5	4.5	2.3	58	66	4.1	11	12	29	62	70	61	22	3.0	5.0	0.4	3
	15	16	50	20	8.5	5.0	2.8	67	76	4.2	18	22	41	71	86	75	26	3.5	6.0	0.5	4
	20	17	50	20	8.5	5.0	2.8	67	76	4.2	18	22	41	71	86	75	26	3.5	6.0	0.5	4
	30	17	75	20	8.5	5.0	2.8	93	102	4.2	18	22	41	99	110	96	26	3.5	6.0	0.5	4
KHIS	40	17	90	20	8.5	5.0	2.8	102	116	4.2	18	22	41	115	124	110	26	3.5	6.0	0.5	4
	50	28	75	33	14.0	8.0	4.0	100	120	6.0	26	30	62	110	133	101	35	4.2	8.5	1.4	4
	60	28	90	33	14.0	8.0	4.0	116	133	6.0	26	30	62	128	148	117	35	4.2	8.5	1.4	4
KG	80	28	115	33	14.0	8.0	4.0	140	161	6.0	26	30	62	150	173	143	35	4.2	8.5	1.4	5
	100	28	140	33	14.0	8.0	4.0	168	189	6.0	26	30	62	175	198	168	35	4.2	8.5	1.4	5
KZG	120	28	165	33	14.0	8.0	4.0	190	212	6.0	26	30	62	200	221	191	35	4.2	8.5	1.4	5
	150	28	195	33	14.0	8.0	4.0	220	242	6.0	26	30	62	230	253	225	35	4.2	8.5	1.4	5
KHZ	200	28	254	33	14.0	8.0	4.0	280	300	6.0	26	30	62	290	313	282	35	4.2	8.5	1.4	5
	300	42	254	45	24.0	12.0	5.5	285	316	6.5	40	40	86	300	330	288	52	5.0	12.0	1.6	5
	400	42	330	45	24.0	12.0	5.5	360	388	6.5	40	40	86	380	407	366	52	5.0	12.0	1.6	5
	500	52	300	57	29.0	15.0	9.0	325	345	6.5	54	41	99	345	362	338	53	5.0	12.0	2.2	5
	600	52	330	57	29.0	15.0	9.0	360	380	6.5	54	41	99	375	392	368	53	5.0	12.0	2.2	5
	700	65	330	65	46.0	20.0	10.0	370	380	10.0	65	59	126	385	404	370	75	10.0	20.0	2.2	6
	1000	77	330	71	47.0	20.0	10.0	365	385	10.0	75	63	130	388	408	372	80	10.0	20.0	2.2	6
1200	77	330	71	47.0	20.0	10.0	365	385	10.0	75	63	130	388	408	372	80	10.0	20.0	2.2	6	

**SHORT TIME OVER LOAD RATING**

Load time(sec)	1	2	3	4	5	10	30	60	180	300	600	900
Max Rated Load(%)	2600	2000	1600	1400	1300	1000	600	450	200	150	120	110

**ORDERING PROCEDURE EXAMPLE**

<b>KZG200</b>	<b>100</b>	<b>J</b>
Model Number	Resistance	Tolerance