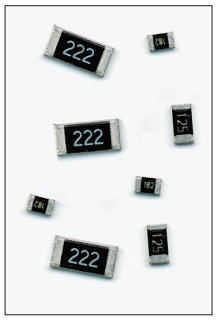
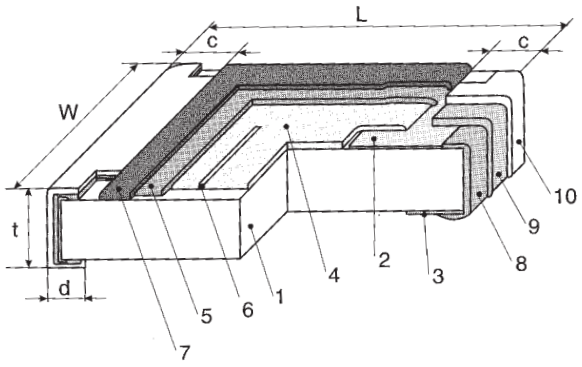
FLAT CHIP

THICK FILM (5% • 2%)
GENERAL PURPOSE
RK73B





STRUCTURE

1	Ceramic substrate		
2	Top termination (Ag Pd)	~ 11	µm
3	Bottom termination (Ag Pd)	~ 11	µm
4	Resistive layer	~ 11	µm
5	Glass layer	~ 11	µm
6	Trimming cut		
7	Protective layer	~ 25	µm
8	End termination	~ 0.05	µm
9	Diffusion barrier (Ni)	~ 8	µm
10	Solder plating	~ 8	µm

IDENTIFICATION

TYPE	COATING COLOR	MARKING
RK73 1E and RK73 1H	Black	None
RK73 1J ... RK73 3A		White, 3 digits

TYPE DESIGNATION (HOW TO ORDER)

Old Part No.	RK73K	1J	G		TD	10K		
New Part No.	RK73B	1J		L	TD	103	G	
	PRODUCT CODE	STYLE	TOLERANCE	TERMINATION SURFACE MATERIAL T: Sn L: Sn/Pb	TAPING*	NOMINAL RESISTANCE 3 digits	TOLERANCE	

*Please see "PACKAGING"

FEATURES

- RuO_2 thick film resistor element
- Anti-leaching nickel barrier terminations
- Excellent heat resistance and moisture resistance are ensured by the use of metal glaze thick film
- Rated ambient temperature: +70° C
- Taping according to IEC-60 286-3
- Meets or exceeds IEC 60 115, CECC 40 401-802
- Suitable for reflow and wave soldering
- Lab Kit available

DIMENSIONS (mm)

SIZE	TYPE	L	W	c	d	t
0201	RK73 1H	0.6 ± 0.03	0.3 ± 0.03	0.1 ± 0.05	0.15 ± 0.05	0.23 ± 0.03
0402	RK73 1E	1.0 $^{+0.1}_{-0.05}$	0.5 ± 0.05	0.2 ± 0.1	0.25 $^{+0.05}_{-0.1}$	0.35 ± 0.05
0603	RK73 1J	1.6 ± 0.2	0.8 ± 0.1	0.3 ± 0.1	0.3 ± 0.1	0.45 ± 0.1
0805	RK73 2A	2.0 ± 0.2	1.25 ± 0.1	0.4 ± 0.2	0.3 $^{+0.2}_{-0.1}$	0.5 ± 0.1
1206	RK73 2B	3.2 ± 0.2	1.6 ± 0.2	0.5 ± 0.3	0.4 $^{+0.2}_{-0.1}$	0.6 ± 0.1
1210	RK73 2E		2.6 ± 0.2			
2010	RK73 2H	5.0 ± 0.2	2.5 ± 0.2			
2512	RK73 3A	6.3 ± 0.2	3.1 ± 0.2			

RATING

SIZE	TYPE	T.C.R. (ppm/K)	POWER RATING	MAX. WORKING VOLTAGE	MAX. OVERLOAD VOLTAGE	RESISTANCE RANGE (E24) G (± 2%)	RESISTANCE RANGE (E24) J(± 5%)	OPERATING TEMPERATURE RANGE
NEW 0201	RK73B 1H	± 400	0.05 W	25 V	50 V	–	1 Ω . . . 9.1 Ω 1.1 MΩ . . . 4.7 MΩ	- 55° C ... + 125° C*
		± 200				10 Ω ... 1 MΩ	10 Ω ... 1 MΩ	
0402	RK73B 1E	± 400	0.063 W	50 V	100 V	–	1 Ω . . . 9.1 Ω	
		± 200				10 Ω ... 10 MΩ	10 Ω ... 10 MΩ	
0603	RK73B 1J	± 400	0.1 W			1 Ω . . . 9.1 Ω	1 Ω . . . 9.1 Ω 11 MΩ . . . 22 MΩ	- 55° C . . . +155° C*
		± 200				10 Ω ... 10 MΩ	10 Ω... 10 MΩ	
0805	RK73B 2A	± 400	0.125 W	150 V	200 V	1 Ω . . . 9.1 Ω 1.1 MΩ . . . 10 MΩ	1 Ω . . . 9.1 Ω 1.1 MΩ . . . 10 MΩ	
		± 200				10 Ω ... 1 MΩ	10 Ω ... 1 MΩ	
1206	RK73B 2B	± 400	0.25 W	200 V	400 V	1 Ω . . . 9.1 Ω 6.2 MΩ . . . 22 MΩ	1 Ω . . . 9.1 Ω 6.2 MΩ . . . 22 MΩ	
		± 200				10 Ω ... 5.6 MΩ	10 Ω ... 5.6 MΩ	
1210	RK73B 2E	± 400	0.5 W 0.33 W			—	1 Ω . . . 9.1 Ω 6.2 MΩ . . . 10 MΩ	- 55° C . . . +125° C*
		± 200	0.5 W 0.33 W			10 Ω . . . 1 kΩ 1.1 kΩ . . . 5.6 MΩ	10 Ω . . . 1 kΩ 1.1 kΩ . . . 5.6 MΩ	
2010	RK73B 2H	± 400	0.75 W			—	1 Ω . . . 9.1 Ω 6.2 MΩ . . . 22 MΩ	
		± 200				10 Ω ... 5.6 MΩ	10 Ω ... 5.6 MΩ	
2512	RK73B 3A	± 400	1 W			—	1 Ω . . . 9.1 Ω 6.2 MΩ . . . 22 MΩ	
		± 200				10 Ω ... 5.6 MΩ	10 Ω ... 5.6 MΩ	

* Please note derating diagram

FLAT CHIP

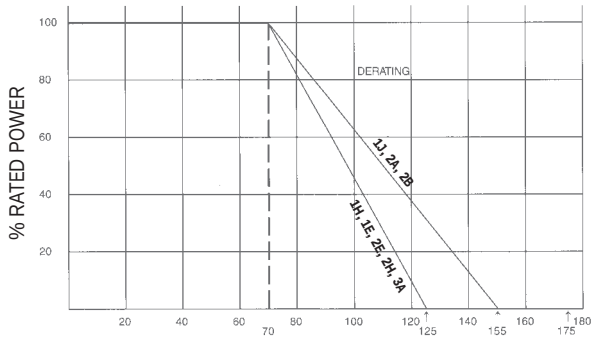
THICK FILM

RK73

PERFORMANCE

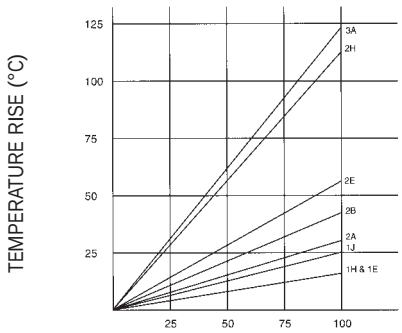
TEST	TEST CONDITIONS	TYP. TEST RESULTS
Life test at 70° C rated power (P_{70})	IEC 115-1 4.25.1 70° C ± 3° C, 1000 h; 1.5 h On / 0.5 h Off cycle	± (1% · R + 0.05 Ω)
Rapid change of temperature	IEC 115-1 4.19 – 55° C (30 min) / + 125° C (30 min); 5 cycles	± (0.5 % · R + 0.1 Ω)
Damp heat steady state	IEC 115-1 4.24 56 days at 40° C and 93% relative humidity	± (1% · R + 0.05 Ω)
Endurance at 125° C	IEC 115-1 4.25.3 + 125° C / 1000 h	± (1% · R + 0.05 Ω)
Short time overload	IEC 115-1 4.13 6.25 x rated power for 5 sec., but smaller 2.5 x Umax	± (1% · R + 0.05 Ω)
T.C.R.	IEC 115-1 4.8 Cycle: + 25° C/- 55° C/+ 25 ° C/+ 125 ° C/+ 25 ° C	Within specified T.C.R.
Bending test	IEC 115-1 4.31 Bending: 5 mm (1J, 2A, 2B); 3 mm (1H, 1E); 2 mm (2E, 2H, 3A)	± (0.5% · R + 0.05 Ω)
Solderability	IEC 68-2-20 235 ± 5° C / 2 ± 0.5 sec.	Terminations > 95% covered with new solder
Resistance to soldering heat	IEC 115-1 4.18 10 ± 1 sec. at 260 ± 5° C solder bath temperature	± (0.5% · R + 0.05 Ω)

DERATING CURVE



AMBIENT TEMPERATURE (°C)

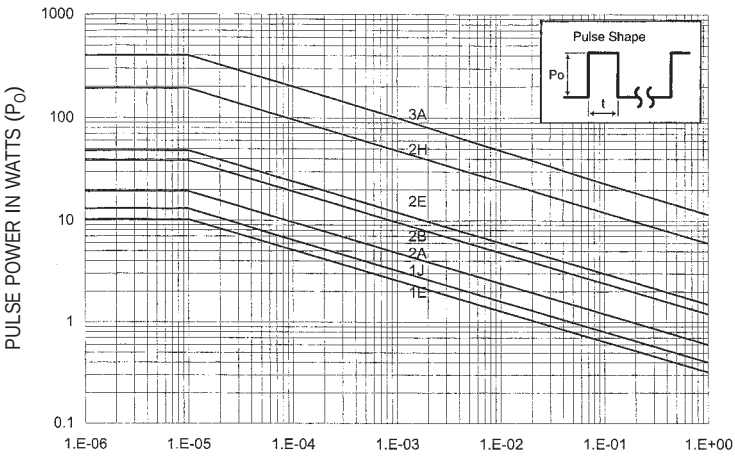
SURFACE TEMPERATURE RISE



% RATED POWER

ONE-PULSE LIMITING ELECTRIC POWER

KOA RK73 Flat Chip Resistors

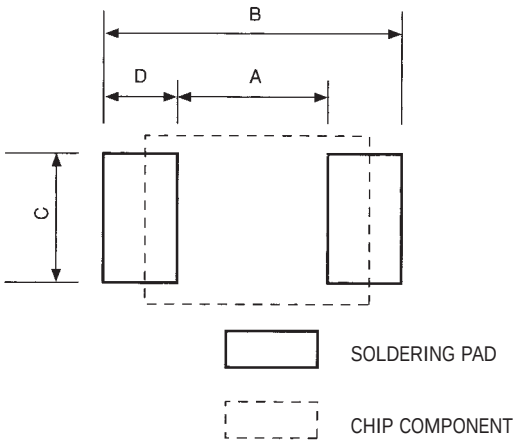


PULSE DURATION TIME IN SECONDS (t)

RECOMMENDED PAD DIMENSIONS

FOR REFLOW SOLDERING

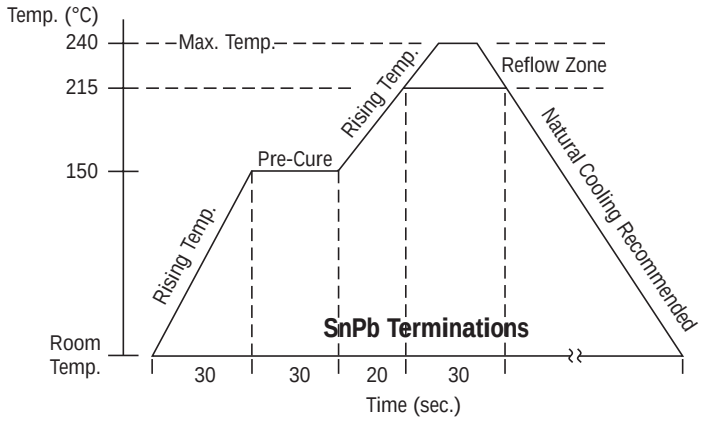
TYPE	STYLE	DIMENSIONS (mm)				
		COMPONENT SIZE	A	B	C	D
RK73 SG73 RN73 SR73 RK73N LT73 NT73 PT72 LA73 CR73 RF73 KL73	1H	0.6 x 0.3	0.25	0.7	0.3	0.225
	1E	1.0 x 0.5	0.5	1.3	0.3	0.4
	1J	1.6 x 0.8	1.0	2.0	0.6	0.5
	2A	2.0 x 1.25	1.3	2.5	1.05	0.6
	2B	3.2 x 1.6	2.2	4.0	1.4	0.9
	2E	3.2 x 2.5	2.2	4.0	2.3	0.9
	2H	5.0 x 2.5	3.5	6.3	2.3	1.4
	3A	6.4 x 3.2	4.6	8.0	3.0	1.7



FOR WAVE SOLDERING

TYPE	STYLE	DIMENSIONS (mm)				
		COMPONENT SIZE	A	B	C	D
RK73 SG73 RN73 SR73 RK73N LT73 NT73 LA73 CR73 RF73 KL73	1E	1.0 x 0.5	0.5	1.5	0.5	0.5
	1J	1.6 x 0.8	1.0	2.4	0.8	0.7
	2A	2.0 x 1.25	1.3	3.1	1.25	0.9
	2B	3.2 x 1.6	2.2	4.4	1.6	1.1
	2E	3.2 x 2.5	2.2	4.4	2.5	1.1
	2H	5.0 x 2.5	3.5	6.3	2.5	1.4
	3A	6.4 x 3.2	4.6	8.0	3.2	1.7

RECOMMENDED IR PROFILE (FLAT TYPE COMPONENTS)



RECOMMENDED WAVE SOLDER PROFILE (FLAT TYPE COMPONENTS)