

AXIAL LEADED CERAMIC-HOUSED POWER RESISTORS

KFD0620, KFD0625, KFD0638, KFD0920, KFD0925, KFD0938, KFD0950, KFD0975



Features and Applications

Low cost and the industry's broad selection, tolerance to $\pm 5\%$ or 10% and TCR ± 200 ppm/ $^{\circ}\text{C}$.
Wide resistance range covers 0.051Ω to $82\text{K}\Omega$ and rated power of 4W to 17W .

Tape & Reel is available up to 7W size.

KFD resistors are designed for general purpose and semi-precision power applications. The fireproof ceramic construction provides excellent thermal conductivity and resistance to moisture & solvents.

The resistance element is wirewound.

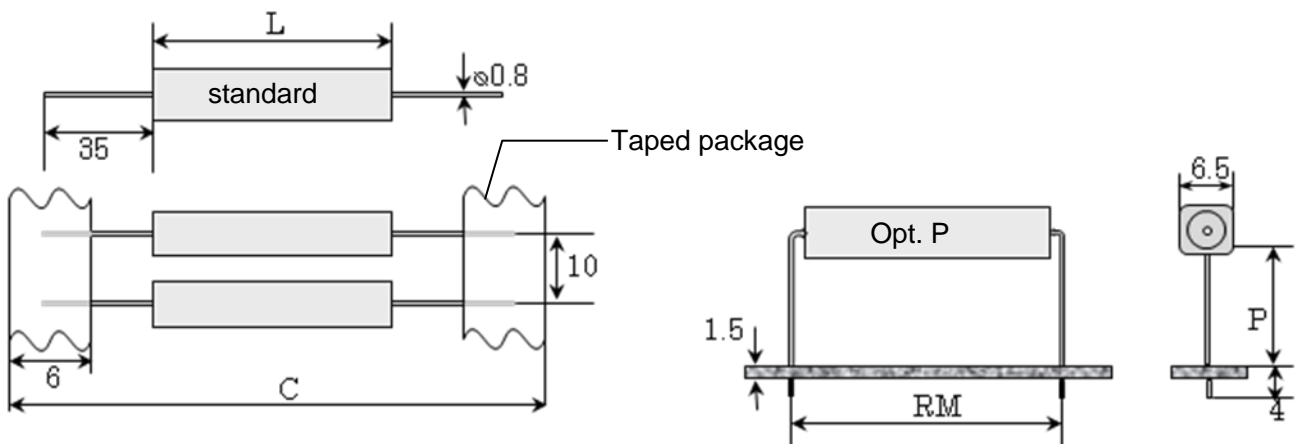
Temperature Rise Power resistors reach elevated temperatures (typically 200°C to 300°C)

When operated at full wattage, so when utilizing above 50% power rating, the bodies should be mounted off the PCB with adequate clearance from heat sensitive components. Opt. P standoffs are helpful in preventing heat transfer to PCB.

Ordering Information

Type	TCR	Option	Resistance	Tolerance	Packaging
KFD0620	- (Blank)	P: standoffs	100ohm	K (10%)	Z00 (BULK)
KFD0625	(200ppm)	Blank: standard	E12 or E24	J (5%)	Z01 (Taped package)
KFD0638					
KFD0920					
KFD0925					
KFD0938					
KFD0950					
KFD0975					

Dimensions and description



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Style		KFD 0620	KFD 0625	KFD 0638
Dimensions	L	20+/-1mm	25+/-1mm	38+/-1mm
	P	8mm or 15mm		
	RM	25mm	30mm	
	C	94+/-2mm	101+/-2mm	
Carrier		Fiber glass core		
Resistance range	CuNi 10	R051 – R11	R10 – R22	R18 – R39
	CuNi 44/NiCr	R12 – 9K1	R24 – 18K	R43 – 33K
Resistance tolerances		K (±10%) CuNi 10 / CuNi 44 / NiCr J (±5%) CuNi 44 / NiCr		
Power rating Pn		4W	5W	7W
Dissipation at $\theta_a = 25^\circ\text{C}$	$\theta_s = 150^\circ\text{C}$	1.8W	2.4W	3.1W
	$\theta_s = 200^\circ\text{C}$	2.8W	3.6W	4.9W
	$\theta_s = 255^\circ\text{C}$	4.0W	5.0W	7.0W
Dissipation at $\theta_a = 70^\circ\text{C}$	$\theta_s = 200^\circ\text{C}$	1.9W	2.5W	3.5W
	$\theta_s = 250^\circ\text{C}$	2.9W	3.7W	5.0W
	$\theta_s = 300^\circ\text{C}$	4.0W	5.0W	7.0W
Dielectric withstanding voltage		$\geq 2000\text{ V}$		
Limiting voltage U		150V	200V	250V
Temperature coefficient		CuNi 10: +350.....+450 x 10 ⁻⁶ /K CuNi 44 / NiCr: -80.....+200 x 10 ⁻⁶ /K		
Lim. surface temperature		CuNi 10: 200 °C CuNi 44 / NiCr: 300 °C		
Marking		Cipher stamped, the marking of values according to DIN/IEC 62		

θ_a =Ambient temperature

θ_s =Surface temperature

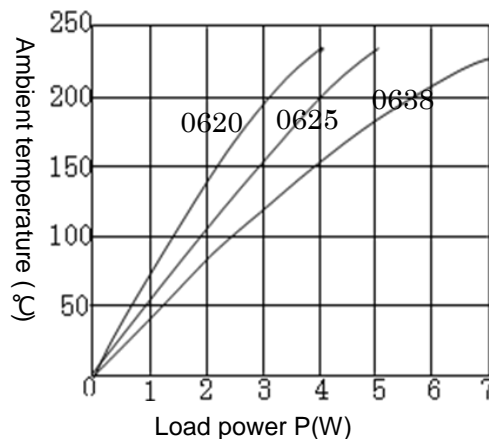
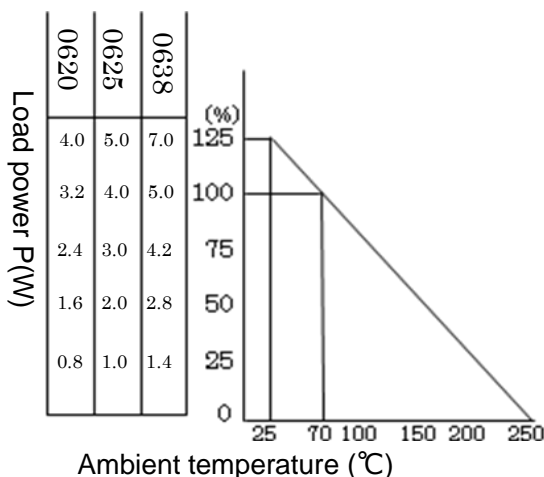
taping: Drum, beltroll, packing unit 1200 pcs.

*The solderability of leads of resistors mounted in ceramic casings is limited within a range of 5 mm.

Nominal resistances	Series E 12 (10%), Series E 24 (5%),
Climatic category IEC 68	55 / 250 / 10
Solderability (260°C, 10s)	$\leq 1\% + 0.1 \Omega$
Temperature cycling (-55°C / +200°C)	$\leq 2\% + 0.1 \Omega$
Damp heat (21 days 40°C / 95% r.h.)	$\leq 3\% + 0.1 \Omega$
Resistance change $\theta_s = 255^\circ\text{C}$	1,000 h: -1.5 till +4.0%
	10,000 h: -2.0 till +6.0%
	100,000 h: -3.0 till +10.0%

The mentioned values apply for 99.7% of all resistors. For low-value resistors, the mentioned variations may be exceeded by 0.1Ω.

Reliability: At 70°C ambient temperature, 25% r.h. and 255°C surface temperature standard rating for complete failure: $\leq 100 \times 10^{-9}/\text{h}$.



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Style		KFD 0920	KFD 0925	KFD 0938	KFD 0950	KFD 0975
Dimensions		20 ±1 mm	25 ±1 mm	38 ±1 mm	50 ±1.5 mm	75 ±2 mm
Carrier		Fiber glass core				
Resistance tolerances		K (±10%) CuNi 10 / CuNi 44 / NiCr				
		J (±5%) CuNi 44 / NiCr				
Power rating Pn		5W	7W	9W	11W	17W
Dissipation at $\theta_a = 25^\circ\text{C}$	$\theta_s = 150^\circ\text{C}$	2.8W	4.0W	5.3W	6.8W	9.8W
	$\theta_s = 200^\circ\text{C}$	4.1W	6.0W	7.6W	9.4W	14.0W
	$\theta_s = 255^\circ\text{C}$	6.25W	8.75W	12.5W	15.0W	21.25W
Dissipation at $\theta_a = 70^\circ\text{C}$	$\theta_s = 200^\circ\text{C}$	2.9W	4.2W	5.5W	7.0W	10.0W
	$\theta_s = 250^\circ\text{C}$	4.3W	6.2W	7.8W	9.7W	14.4W
	$\theta_s = 300^\circ\text{C}$	5.0W	7.0W	9.0W	11.0W	17.0W
Dielectric withstanding voltage		≥ 2000 V				
Limiting voltage U		150V	200V	250V	350V	500V
Temperature coefficient		CuNi 10: +350.....+450 x 10 ⁻⁶ /K				
		CuNi 44 / NiCr: -80.....+200 x 10 ⁻⁶ /K				
Marking		Cipher stamped, the marking of values according to DIN/IEC 62				

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