

KAL Series

Aluminum Housed Surface Mount Resistor

Stackpole Electronics, Inc.

Resistive Product Solutions

Features:

- Aluminum housing for maximum heat dissipation
- Complete welded construction
- 10-50W tinned copper terminals
- 100-250W threaded terminals
- Centerless ground steatite or alumina cores
- Molded epoxy body for heat transfer
- Non-inductive winding available (NKAL)
- RoHS compliant / lead-free



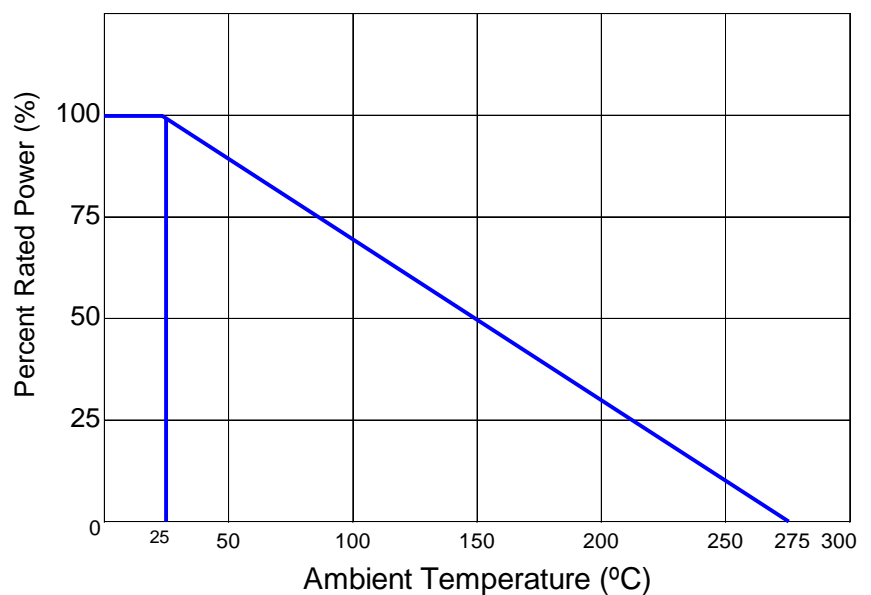
Electrical Specifications

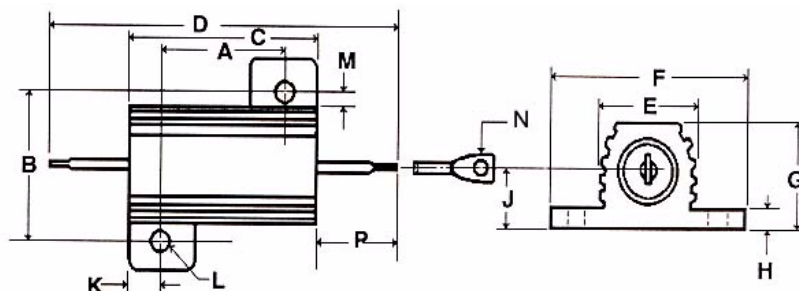
Type / Code	MIL-R-26 Ref.	Power Rating (Watts @ 25°C)		Dielectric Withstanding Voltage	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance		
		Commercial	MIL			0.1%	0.5%	1%, 3%, 5%
KAL10	RE-65	12.5W	10W	1,000 VAC	<div><0.1Ω = ±100ppm 0.1Ω - 9.9Ω = ±50ppm 10Ω - 49Ω = ±30ppm >50Ω = ±20ppm</div>	1 - 1K	1 - 1K	0.05 - 30K
KAL25	RE-70	25W	20W	3,000 VAC				0.05 - 51.1K
KAL50	RE-75	50W	30W					0.05 - 150K
KAL100	RE-77	100W	75W	2,500 VAC		-	1 - 500	0.1 - 3K
KAL250	RE-80	250W	120W					-

Performance Characteristics

Test	Test Conditions	Results
Short time Overload	5x wattage rating - 5 seconds	$\Delta R \pm (0.5\% + 0.05\Omega)$ MAX
Moisture resistance	Temp 40°C moisture 95% CDC 100V for 500 hours	$\Delta R \pm (0.5\% + 0.05\Omega)$ MAX
Load life	Load rating (chassis is mounted) 1.5 hours ON, 0.5 hours OFF. Repeated for 1000 hours	$\Delta R \pm (1.5\% + 0.05\Omega)$ MAX

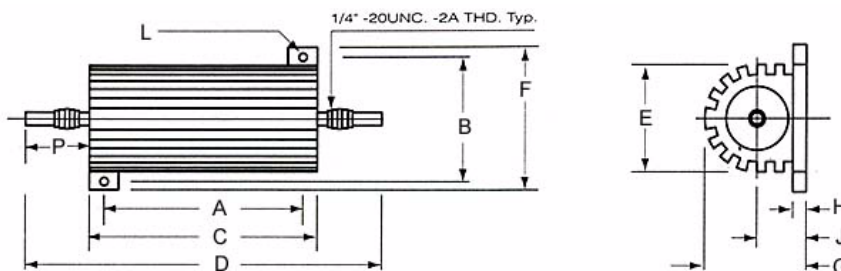
Power Derating Curve:





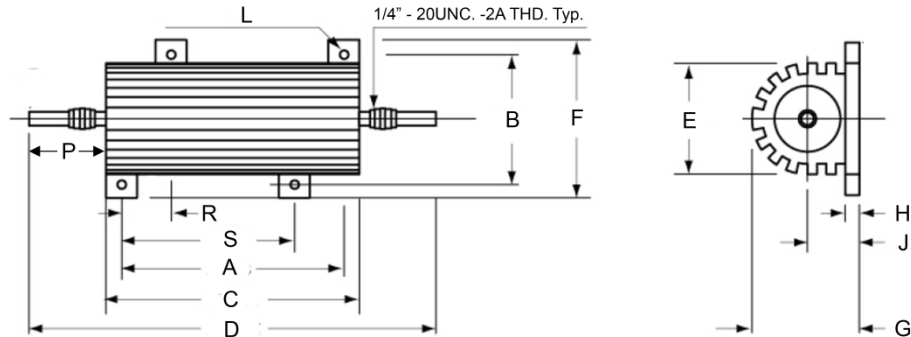
Mechanical Specifications - KAL10/KAL25/KAL50

Type	A	B	C	D	E	F	G	Unit
KAL10	0.562 ± 0.005 14.27 ± 0.13	0.625 ± 0.005 15.88 ± 0.13	0.750 ± 0.031 19.05 ± 0.79	1.375 ± 0.062 34.93 ± 1.57	0.420 ± 0.015 10.67 ± 0.38	0.800 ± 0.015 20.32 ± 0.38	0.390 ± 0.031 9.91 ± 0.79	inches mm
KAL25	0.719 ± 0.005 18.26 ± 0.13	0.781 ± 0.005 19.84 ± 0.13	1.062 ± 0.031 26.97 ± 0.79	1.938 ± 0.062 49.23 ± 1.57	0.550 ± 0.015 13.97 ± 0.38	1.080 ± 0.015 27.43 ± 0.38	0.546 ± 0.031 13.87 ± 0.79	inches mm
KAL50	1.563 ± 0.005 39.70 ± 0.13	0.844 ± 0.005 21.44 ± 0.13	1.968 ± 0.031 49.99 ± 0.79	2.781 ± 0.062 70.64 ± 1.57	0.630 ± 0.015 16.00 ± 0.38	1.140 ± 0.015 28.96 ± 0.38	0.610 ± 0.031 15.49 ± 0.79	inches mm
Type	H	J	K	L	M	N	P	Unit
KAL10	0.075 ± 0.010 1.91 ± 0.25	0.190 ± 0.015 4.83 ± 0.38	0.093 ± 0.010 2.36 ± 0.25	0.093 ± 0.005 2.36 ± 0.13	0.102 ± 0.015 2.59 ± 0.38	0.086 ± 0.005 2.18 ± 0.13	0.312 ± 0.062 7.92 ± 1.57	inches mm
KAL25	0.088 ± 0.010 2.24 ± 0.25	0.260 ± 0.015 6.60 ± 0.38	0.172 ± 0.010 4.37 ± 0.25	0.125 ± 0.005 3.18 ± 0.13	0.115 ± 0.015 2.92 ± 0.38	0.086 ± 0.005 2.18 ± 0.13	0.438 ± 0.062 11.13 ± 1.57	inches mm
KAL50	0.088 ± 0.010 2.24 ± 0.25	0.300 ± 0.015 7.62 ± 0.38	0.196 ± 0.010 4.98 ± 0.25	0.125 ± 0.005 3.18 ± 0.13	0.107 ± 0.015 2.72 ± 0.38	0.086 ± 0.005 2.18 ± 0.13	0.410 ± 0.062 10.41 ± 1.57	inches mm



Mechanical Specifications - KAL100

Type	A	B	C	D	E	F	Unit
KAL100	2.717 ± 0.079 69.00 ± 2.00	2.362 ± 0.039 60.00 ± 1.00	3.504 ± 0.039 89.00 ± 1.00	5.315 ± 0.039 135.00 ± 1.00	1.811 ± 0.039 46.00 ± 1.00	2.756 ± 0.039 70.00 ± 1.00	inches mm
	G	H	J	L	P	Unit	
	1.752 ± 0.039 44.50 ± 1.00	0.187 ± 0.031 4.75 ± 0.79	0.748 ± 0.020 19.00 ± 0.50	0.197 ± 0.012 5.00 ± 0.30	0.906 ± 0.079 23.00 ± 2.00	inches mm	



Mechanical Specifications – KAL250

Type	A	B	C	D	E	F	G	Unit
KAL250	3.858 ± 0.079 98.00 ± 2.00	2.520 ± 0.039 64.00 ± 1.00	4.488 ± 0.039 114.00 ± 1.00	6.102 ± 0.039 155.00 ± 1.00	2.087 ± 0.039 53.00 ± 1.00	3.031 ± 0.039 77.00 ± 1.00	2.185 ± 0.039 55.50 ± 1.00	inches mm
	H	J	L	P	R	S	Unit	
	0.250 ± 0.031 6.35 ± 0.79	0.984 ± 0.020 25.00 ± 0.50	0.197 ± 0.012 5.00 ± 0.30	0.827 ± 0.079 21.00 ± 2.00	0.866 22.00	3.071 78.00	inches mm	

How to Order

1	2	3	4	5	6	7	8	9	10	11
K	A	L	1	0	F	B	1	0	K	0
Product Series		Size	Power	Tolerance		Packaging				Resistance Value
KAL	Standard	10	10W	Code	Tol	Code	Description	Size	MOQ	Four characters with "L" used as multiplier of 10 ⁻³ for any value under 0.1 ohm. 0.05 ohm = 50L0 0.4 ohm = R400 1 ohm = 1R00 30 Kohm = 30K0
NKAL	Non-inductive	25	25W	B	0.1%	B	Bulk	10	250	
		50	50W	D	0.5%			25	250	
		100	100W	F	1%			50	250	
		250	250W	H	3%			100	60	
				J	5%			250	30	

Legacy Part Number (before January 3, 2011):

SEI Type		Code		Nominal Resistance	Tolerance	Packaging			
KAL		10		10K	1%	B			
Type	Description	Code	Wattage		Tolerance	Types	MOQ	Description	Code
KAL	Standard	10	10W		0.1%	KAL10	250	Bulk	B
NKAL	Non-Inductive	25	25W		0.5%	KAL25	250		
		50	50W		1%	KAL50	250		
		100	100W		3%	KAL100	60		
		250	250W		5%	KAL250	30		