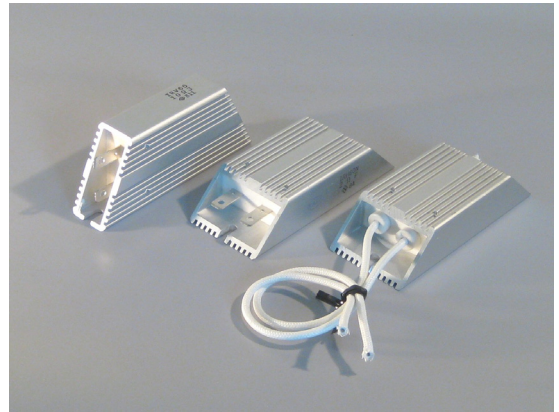
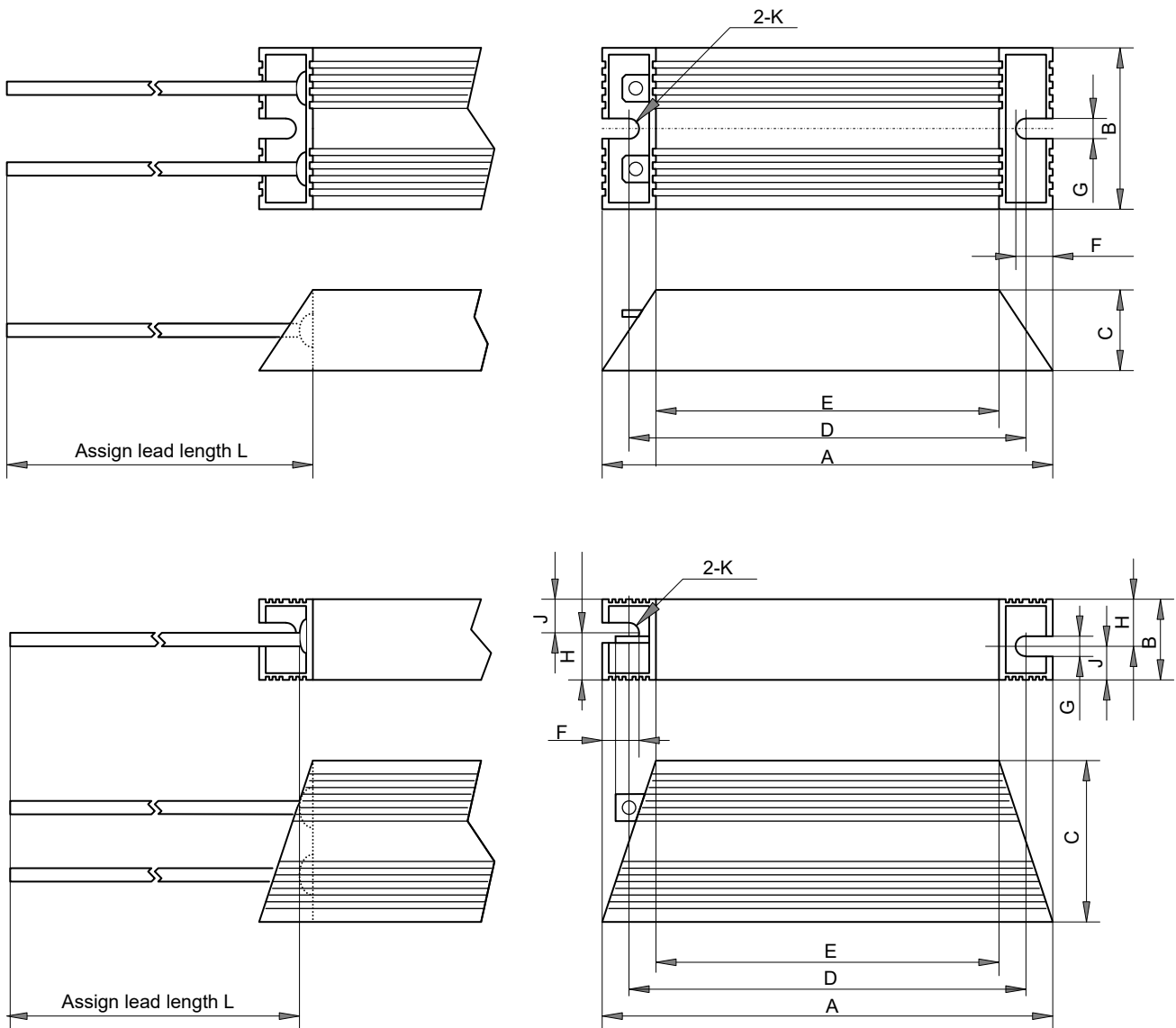


# Metal Clad Wire Wound Resistors IRV, IRH, ULV, ULH



## Features and Applications

- Overload durable, metal clad wire wound power resistor.
- 60W to 500W rating power, heat conductive cement filled, aluminum housed resistors.
- Flying leads, metal tab and L type metal tab terminals are available.
- Dielectric strength of 1500V to 5400V available.
- Surge protection resistors, recycling resistors, braking resistors for motor control, and current detection resistors for power electronics.



Metal Clad Wire Wound Resistors

IRV, IRH, ULV, ULH

Dimensional Specifications (mm)

	IRV60	IRV80	IRV100	IRV120	IRV150	IRV200	IRV300	IRV400	IRV500
A±2	100	150	165	182	210	165	215	265	335
B±0.5	22	22	22	22	22	30	30	30	30
C±0.5	41	41	41	41	41	60	60	60	60
D±2	87	137	152	169	197	146	196	246	316
E±2	60	110	125	143	170	125	175	225	295
F±0.5	8.65	8.65	8.65	8.65	8.65	12	12	12	12
G±0.5	4.3	4.3	4.3	4.3	4.3	5.3	5.3	5.3	5.3
H	12	12	12	12	12	17	17	17	17
J	10	10	10	10	10	13	13	13	13
K	2.15R	2.15R	2.15R	2.15R	2.15R	2.65R	2.65R	2.65R	2.65R
Weight (g)*	113	189	215	241	290	447	600	780	980

	IRH60	IRH80	IRH100	IRH120	IRH150	IRH200	IRH300	IRH400	IRH500
A±2	100	150	165	182	210	165	215	265	335
B±0.5	41	41	41	41	41	60	60	60	60
C±0.5	22	22	22	22	22	30	30	30	30
D±2	87	137	152	169	197	146	196	246	316
E±2	60	110	125	143	170	125	175	225	295
F±0.5	8.65	8.65	8.65	8.65	8.65	12	12	12	12
G±0.5	4.3	4.3	4.3	4.3	4.3	5.3	5.3	5.3	5.3
H	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-
K	2.15R	2.15R	2.15R	2.15R	2.15R	2.65R	2.65R	2.65R	2.65R
Weight (g)*	110	195	216	245	283	485	600	770	990

\* Weight does not contains flying wire lead.

Power, Resistance, Terminals

	IRV60	IRV80	IRV100	IRV120	IRV150	IRV200	IRV300	IRV400	IRV500
	IRH60	IRH80	IRH100	IRH120	IRH150	IRH200	IRH300	IRH400	IRH500
Rating Power(W)/Chassis	60	80	100	120	150	200	300	400	500
Rating Power(W)/Free Air	48	64	80	96	120	140	210	240	300
Resistance(ohm) inductive	0.1-400	0.1-910	0.1-1.1K	0.1-1.3K	0.1-1.6K	0.1-2.2K	0.1-2.7K	0.1-4.3K	0.1-6.8K
Resistance(ohm) no-induct.	0.1-180	0.1-110	0.1-240	0.1-300	0.1-390	0.1-1.0K	0.1-1.5K	0.1-2.2K	0.1-3.0K
Tolerance (%)	+/-0.5%(D), +/-1.0%(F), +/-2.0%(G), +/-5.0%(J), +/-10%(K)								
Terminal Wire of 1.25 mm <sup>2</sup>	>1.0 ohms					NA	NA	NA	NA
Terminal Wire of 2 mm <sup>2</sup>	0.1-0.99 ohms					> 5.0 ohms			
Terminal Wire of 5.5 mm <sup>2</sup>	NA	NA	NA	NA	NA	1-4.99 ohms			
Terminal Wire of 8 mm <sup>2</sup>	NA	NA	NA	NA	NA	0.1-0.99 ohms			
Tab Terminals #250*2	AB	AB	AB	AB	AB	NA	NA	NA	NA
Metal Terminals 2t-10w-4.3φ	NA	NA	NA	NA	NA	AB	AB	AB	AB
L-Type Metal Terminals	NA								

\* AB: available, NA: not available

Power, Resistance, Terminals (UL)

	ULV60	ULV80	ULV100	ULV120	ULV150	ULV200	ULV300	ULV400	ULV500
	ULH60	ULH80	ULH100	ULH120	ULH150	ULH200	ULH300	ULH400	ULH500
Rating Power(W)/Chassis	60	80	100	120	150	200	300	400	500
Rating Power(W)/Free Air	48	64	80	96	120	140	210	240	300
Resistance(tab) inductive	0.1-375	0.1-281	0.1-225	0.1-187	0.1-150	0.1-450	0.1-300	0.1-225	0.1-180
Resistance(tab) no-induct.	0.1-180	0.1-110	0.1-225	0.1-187	0.1-150	0.1-450	0.1-300	0.1-225	0.1-180
Resistance(fly) inductive	0.1-400	0.1-910	0.1-1.1K	0.1-1.3K	0.1-1.6K	0.1-2.2K	0.1-2.7K	0.1-4.3K	0.1-6.8K
Resistance(fly) no-induct.	0.1-180	0.1-110	0.1-240	0.1-300	0.1-390	0.1-1.0K	0.1-1.5K	0.1-2.2K	0.1-3.0K
Tolerance (%)	+/-2.0%(G), +/-5.0%(J), +/-10%(K)								

Specifications and Performance

TCR(ppm/K)	±260ppm/K(H)
Tolerance (%), not UL	±0.5%(D), ±1.0%(F), ±2.0%(G), ±5.0%(J), ±10%(K)
Dielectric Strength	AC1500V, AC2500V, AC3000V, AC4500V and AC5400V are available at leakage current 2mA.
Temperature Range	-55 C to +200 C
Insulation Resistance	< 20Mohms
Short Time Over Load	±2%, (Rating power×10 in 5 seconds interval) (IRH/V60, Rating power×5 in 5 seconds interval)
Moisture Resistance	±3%, (40C,95%RH, DC100V case / terminal, 500hours)
Thermal Shock(%-ohms)	±2%, (After power with rating for 30 minutes, -15C, 15 minutes)
Vibration(%-ohms)	±1%, (10Hz-55Hz-10Hz, 1minute cycle, for 2 hours with x-y direction)
Humidity(%-ohms)	±3%, (40C,95%-RH, 0.1*power rating , 1.5hours on, 0.5hours off, 500hours)
Load Life(%-ohms)	±5%, (Power rating , 1.5hours on 0.5hours off, 500hours)
Filling	Cement

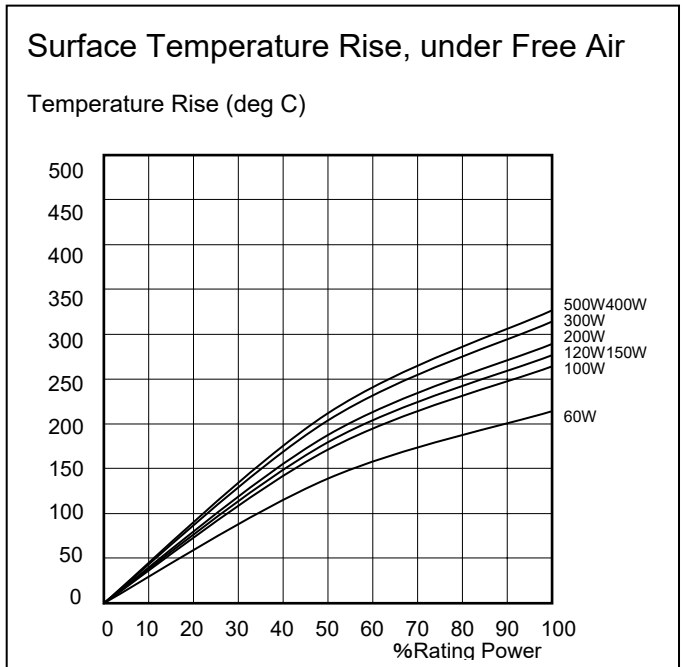
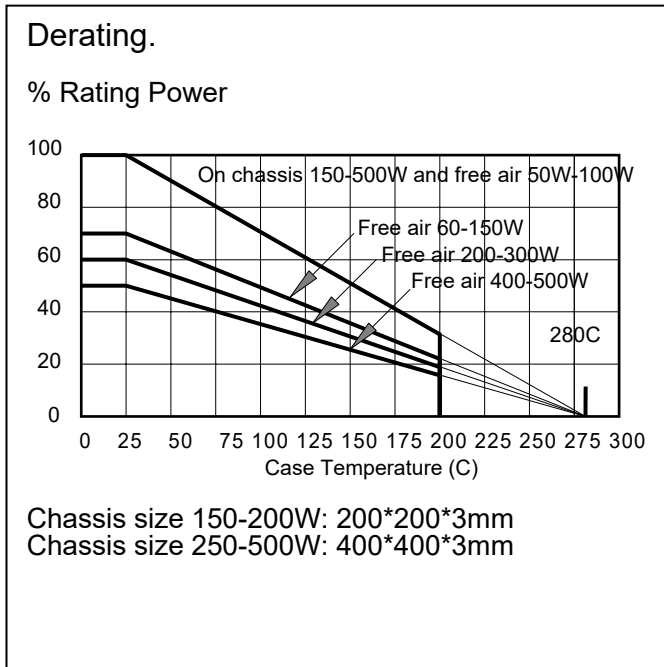
Metal Clad Wire Wound Resistors

IRV, IRH, ULV, ULH

Ordering Information

Type	Power	Winding	Resistance	Tolerance	Terminals	Insulation
IRV	500	-	0.1 ohm	J	FL300mm	4500V
IRV	60	- (inductive) N (non-ind)	See table	0.5% (D) 1.0% (F) 2.0% (G) 5.0% (J) 10% (K) -UL- 2.0% (G) 5.0% (J) 10% (K)	Flying Lead TAB#250 TAB4.3D TAB-L (NA)	1500Vac 2500Vac* 3000Vac 4500Vac 5400Vac
IRH	80					
	100					
	120					
	150					
	200					
ULV	300					Standard
UHV	400					2500Vac
	500					

Type	8 mm <sup>2</sup>	5.5 mm <sup>2</sup>	2 mm <sup>2</sup>	1.25mm <sup>2</sup>	UL3512 AWG10	UL3512 AWG14
IRH/IRV 60-150	-	-	0.1-0.99 ohm	1 - ohm	-	-
IRV/IRH 200-500	0.1-0.99 ohm	1.0-4.99 ohm	5.0 - ohm	-	-	-
ULH/ULV 60-120	-	-	-	-	-	0.1 ohm-
ULH/ULV 150	-	-	-	-	-	0.11 ohm-
ULH/ULV 200	-	-	-	-	0.1-0.15 ohm	0.16 ohm-
ULH/ULV 300	-	-	-	-	0.1-0.22 ohm	0.23 ohm-
ULH/ULV 400	-	-	-	-	0.1-0.30 ohm	0.31 ohm-
ULH/ULV 500	-	-	-	-	0.1-0.37ohm	0.38 ohm-



Note

- (1) Installation of a thermal protection switch is available. Please contact to [info@nikkohm.com](mailto:info@nikkohm.com).
- (2) Flying lead length is assigned by your requirement.
- (3) Insulating voltage is assigned by your requirement.