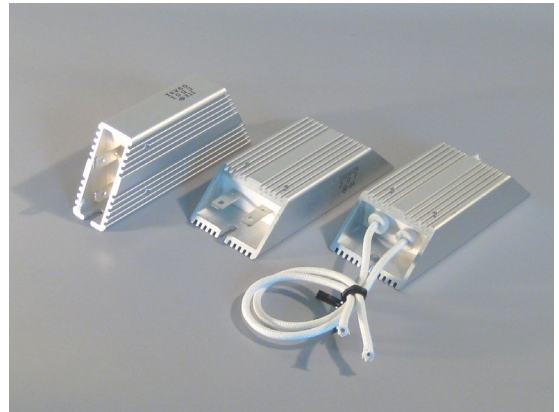
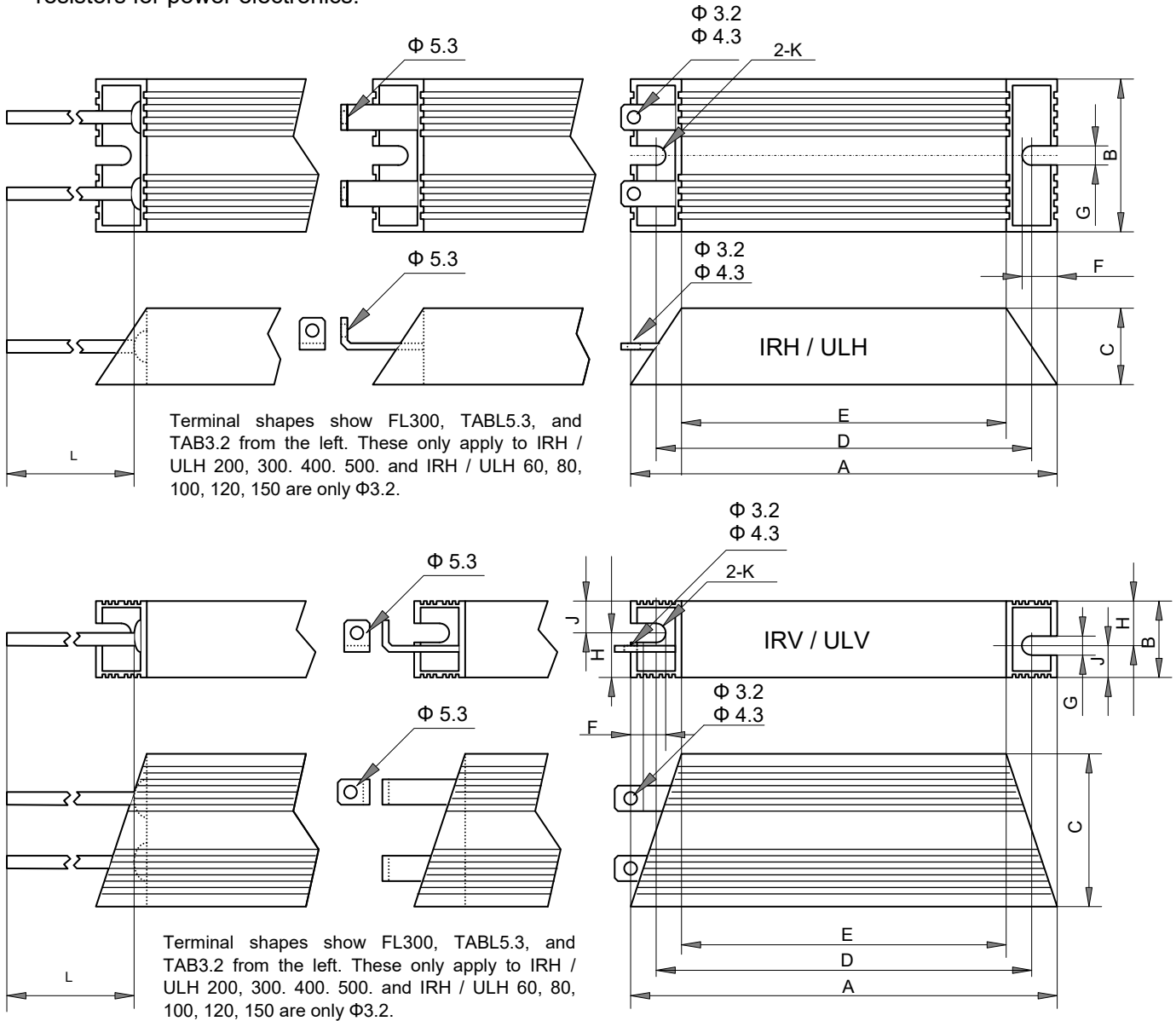


Metal Clad Wire Wound Resistors IRV, IRH, ULV, ULH



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	142	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	9.65	9.65	9.65	9.65	9.65	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 ²	Over 1.0 Ω					x	x	x	x
Terminal Wire of 2 mm ²	0.1Ω - 0.99Ω					over 0.38 Ω			
Terminal Wire of 5.5 mm ²	x	x	x	x	x	(option 0.1Ω - 0.99Ω)			
Terminal Wire UL3512 AWG10	x	x	x	x	x	0.1Ω - 0.37Ω			
Tab Terminals 3.2D	O	O	O	O	O	x	x	x	x
Tab Terminals 4.3φ	x	x	x	x	x	O	O	O	O
Metal terminals L 5.3Φ	x	x	x	x	x	O	O	O	O

* O available, X: 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

Ordering Information

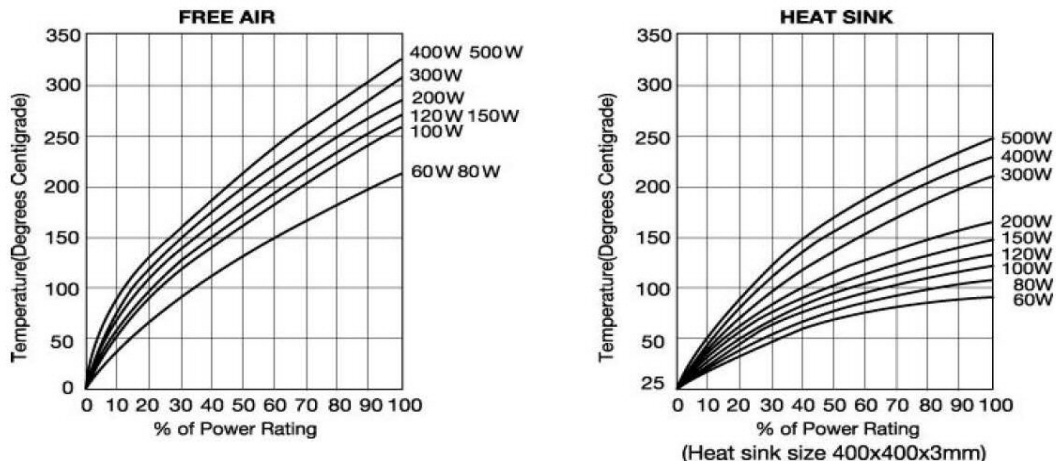
Type IRV	Power 500	Winding -	Resistance 0.1 ohm	Tolerance J	Terminals FL300mm	Insulation 4500V
IRV	60	- (inductive)	See table	0.5% (D)	Flying Lead	1500Vac
IRH	80	N (non-induct.)		1.0% (F)	TAB 3.2D	2500Vac*
	100			2.0% (G)	TAB 4.3DD	3500Vac
	120			5.0% (J)	TAB-L 5.3D	4500Vac
	150			10% (K)		5400Vac
	200			-UL-		
ULV	300			2.0% (G)		Standard
UHV	400			5.0% (J)		2500Vac
	500			10% (K)		

IRV, IRH, ULV, ULH

Wire Terminal Indications

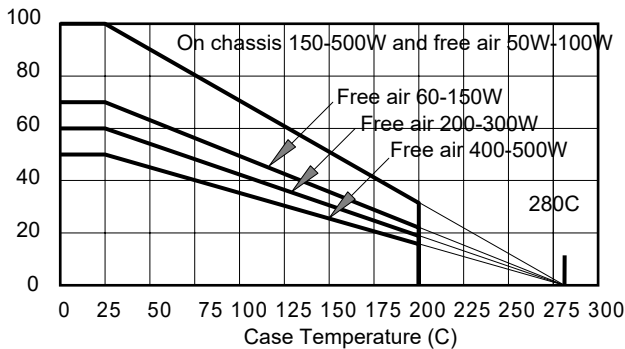
Type	5.5 mm ²	2 mm ²	1.25mm ²	UL3512 AWG10 (5.5SQ)	UL3512 AWG14 (2.0SQ)
IRH60-150 / IRV 60-150	X	0.1 Ω - 0.99 Ω	1.0 Ω - -	X	X
IRV200-500 / IRH 200-500	(0.1Ω - 4.99Ω) option	0.38 Ω - -	X	0.1Ω - 0.37Ω	X
ULH60-120 / ULV 60-120	X	X	X	X	0.1 Ω - -
ULH150 / ULV 150	X	X	X	X	0.11 Ω - -
ULH200 / ULV 200	X	X	X	0.1Ω - 0.15 Ω	0.16 Ω - -
ULH300 / ULV 300	X	X	X	0.1Ω - 0.22 Ω	0.23 Ω - -
ULH400 / ULV 400	X	X	X	0.1Ω - 0.30 Ω	0.31 Ω - -
ULH500 / ULV 500	X	X	X	0.1Ω - 0.37 Ω	0.38 Ω - -

Surface Temperature Rise, under Free Air and on Heat Sink



Derating.

% Rating Power



Chassis size 150-200W: 200*200*3mm
 Chassis size 250-500W: 400*400*3mm

Note

- (1) When specifying the terminal as insulated wires, please specify the wire length in mm, such as FL300.
- (2) If the terminal designation is left blank, it will be a metal terminal (quick connect or 3.2Φ metal terminal).
- (3) Screw hole terminal holes are not cut, so connect them with bolts and nuts.
- (4) Be sure to specify the insulation withstand voltage. If not specified, the dielectric strength is 1500VAC.
- (5) A thermostat element can be built in the resistor. Please contact info@nikkohm.co.jp.
- (6) For reliable specification, please request a procurement specification or product specification to info@nikkohm.co.jp.
- (7) For the marking on the resistor surface of UL certified, the manufacturer code is not the N mark but the RARA mark of the UL certified applicant.