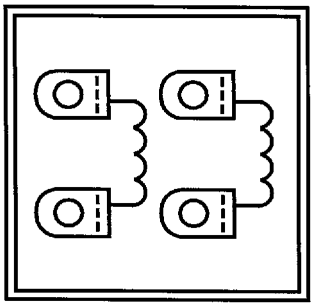
General Specifications

Model	Wattage Rating (Chasis Mounted)	Resistance Range Inductive	Resistance Range Non-Inductive	Tolerance (%)
IRH 60	60	0.1–270	0.1–56	
IRV 60				
IRH 80	80	0.1–910	0.1–110	
IRV 80				
IRH 100		0.1–1.1K	0.1–240	
IRV 100	100			
IRF 100		1–1.1K		
IRH 120	120	0.1–1.3K	0.1–300	±0.5 (D)
IRV 120				
IRH 150		0.1–1.6K	0.1–390	±1(F)
IRV 150	150			
IRF 150		1-1.75K		±2 (G)
IRH 200		0.1–2.2K	0.1–1K	
IRV 200	200			±5 (J)
IRF 200		1–2.2K		
IRF 250	250	1–2.79K		±10 (K)
IRH 300		0.1–2.7K	0.1–1.5K	
IRV 300	300			
IRF 300		1–3.5K		
IRH 400		0.1–4.3K	0.1–2.2K	
IRV 400	400			
IRF 400		1–4.45K		
IRH 500		0.1–6.8K	0.1–3K	
IRV 500	500			
IRF 500		1–5.875		
IRV 600	600	0.1–94	0.1–23	
IRV 800	800	0.1–112	0.1–28	
IRV 1000	1000	0.1–140	0.1–36	
IRV 1200	1200	0.1–160	0.1–40	

IRV 600/1200 Terminals



Each model in this series contains two identical, isolated resistors with two sets of terminals. There is a left upper and a left lower terminal for one resistor, and a right upper and right lower terminal for the other. These isolated resistors may be connected in either serial or parallel.

Part Number Composition

IRH/IRV 60W to 500W

IRV 120 N 100Ω J
Model — For Non-inductive type — Resistance — Tolerance

IRV 600W to 1200W

IRV 1000 P N 100Ω J
Model — Connecting Method P=parallel S=Series — For Non-inductive type — Resistance — Tolerance

IRF 100W to 500W

IRF 500 N S 100Ω J
Model — For Non-inductive type — Encapsulant: S=Silicone C=Cement — Resistance — Tolerance

Technical Data

Parameters	Notes	Rating IRH - IRV	Rating IRF
Operating Temperature		-55°C to +200°C	-55°C to +150°C
Insulation Resistance		20MΩ min.	
Dielectric Strength	IRH/V Options: 3500, 4500, 5400VAC	1500VAC	
Temperature Coefficient of Resistance		±260ppm/°C	
Short Time Overload	5x max. rating for 5 seconds	ΔR±(2%+0.05Ω)max.	ΔR±(1%+0.05Ω)max.
Moisture Resistance	1000 hours	ΔR±(3%+0.05Ω)max.	ΔR±(2%+0.05Ω)max.
Thermal Shock	Wattage rating 30 min.; -25°C 15 min.	ΔR±(2%+0.05Ω)max.	ΔR±(1%+0.05Ω)max.
Vibration	2.2G, 2 hours	ΔR±(1%+0.05Ω)max.	
Moisture Load Life	40°C, 95%RH, 0.1 X Wattage Rating 1.5 hrs. ON, 30 min. OFF, 1000 hrs.	ΔR±(3%+0.05Ω)max.	ΔR±(2%+0.05Ω)max.
Load Life	Wattage rating 1.5 hours ON, 30 min. OFF, 1000 hours	ΔR±(5%+0.05Ω)max.	ΔR±(3%+0.05Ω)max.

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Dimensions - IRH/IRV

Model	Dimensions in (mm)						Weight (grams)
	L1	L2	L3	W	H	D	
IRH 60	100	87		41	22	4.3	110
IRV 60	100	87	60	22	41	4.3	113
IRH 80	150	137		41	22	4.3	195
IRV 80	150	137	110	22	41	4.3	189
IRH 100	165	152		41	22	4.3	216
IRV 100	165	152	125	22	41	4.3	215
IRH 120	182	169		41	22	4.3	245
IRV 120	182	169	142	22	41	4.3	241
IRH 150	210	197		41	22	4.3	283
IRV 150	210	197	170	22	41	4.3	290
IRH 200	165	146		60	30	5.3	485
IRV 200	165	146	125	30	60	5.3	447
IRH 300	215	196		60	30	5.3	600
IRV 300	215	196	175	30	60	5.3	600
IRH 400	265	246		60	30	5.3	770
IRV 400	265	246	225	30	60	5.3	780
IRH 500	335	316		60	30	5.3	990
IRV 500	335	316	295	30	60	5.3	980
IRV 600	235	216	195	61	59	5.3	1165
IRV 800	283	266	245	61	59	5.3	1500
IRV 1000	335	316	295	61	59	5.3	1835
IRV 1200	405	386	365	61	59	5.3	2304
*Tolerance	±2	±2	±2	±0.5	±0.5	±0.5	

Dimensions - IRF

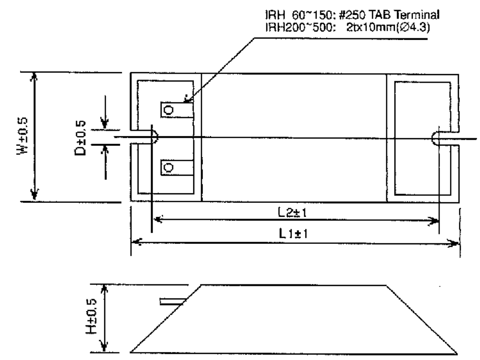
Model	Dimensions in (mm)					Weight (grams)
	L1	L2	L3	W2	W2	
IRF 100	90	70		80	70	155
IRF 150	120	100		80	70	200
IRF 200	150	130		80	70	245
IRF 250	180	160		80	70	290
IRF 300	210	190	95	80	70	335
IRF 400	270	250	125	80	70	430
IRF 500	330	310	155	80	70	525
*Tolerance	±1	±0.3	±0.3	±0.3	±0.3	

Lead Wire Specifications - IRF

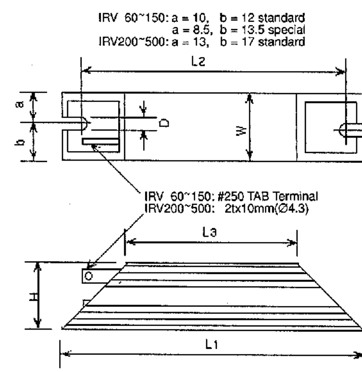
Model	Lead Wire	
	1.25mm^2	2mm^2
IRF 100	1Ω and up	
IRF 150	1Ω and up	
IRF 200	4.1Ω and up	1~4Ω
IRF 250	5.1Ω and up	1~5Ω
IRF 300	6.1Ω and up	1~6Ω
IRF 400	8.1Ω and up	1~8Ω
IRF 500	10.1Ω and up	1~10Ω

Configurations

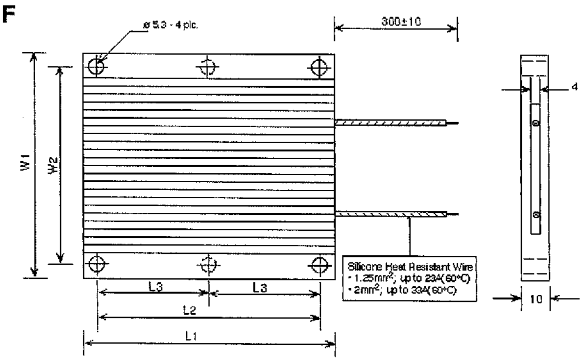
IRH



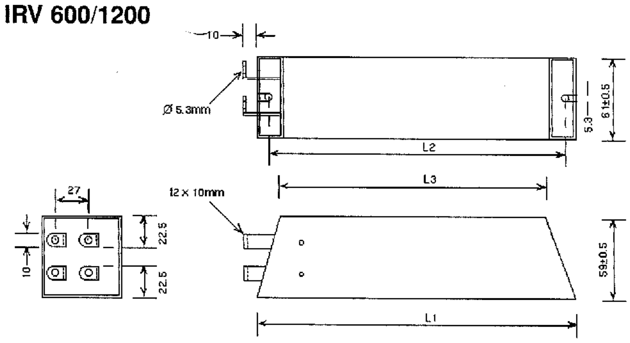
IRV



IRF



IRV 600/1200



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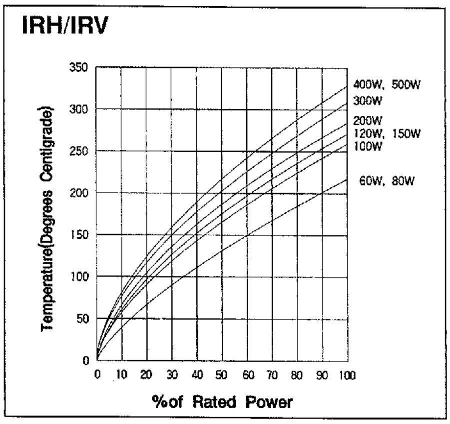
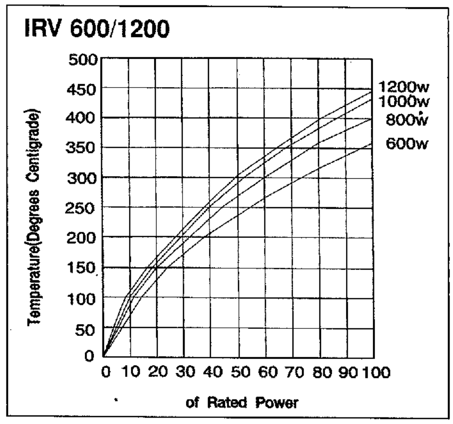
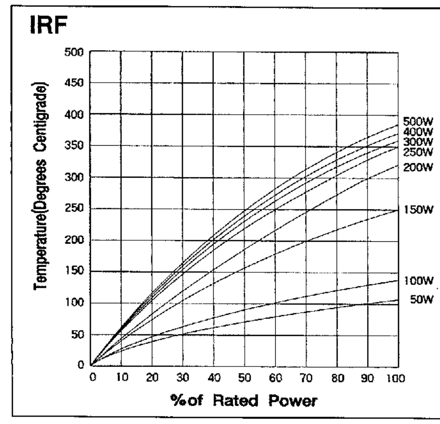
Surface Temperature Increase vs. Power Load

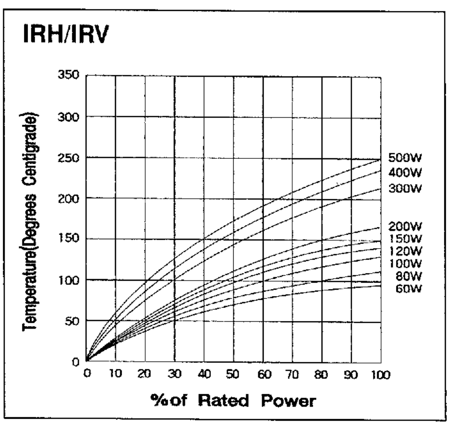
Free Air

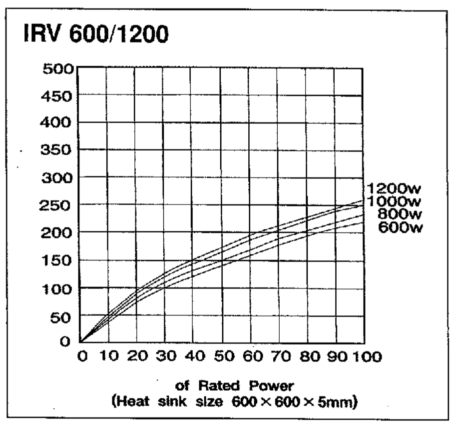


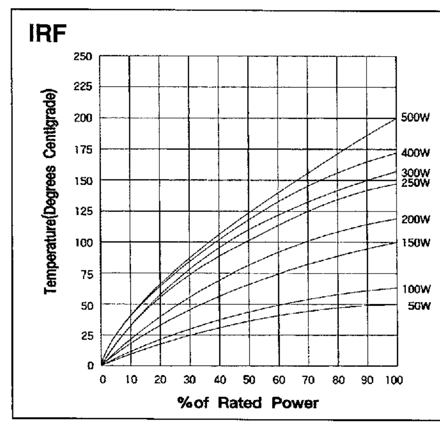




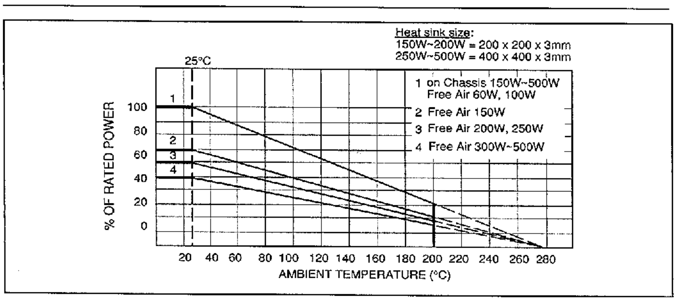
Heat Sink



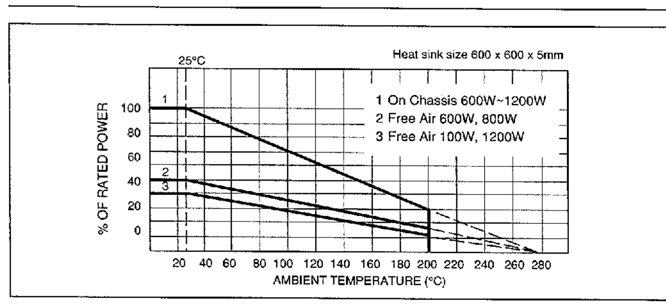




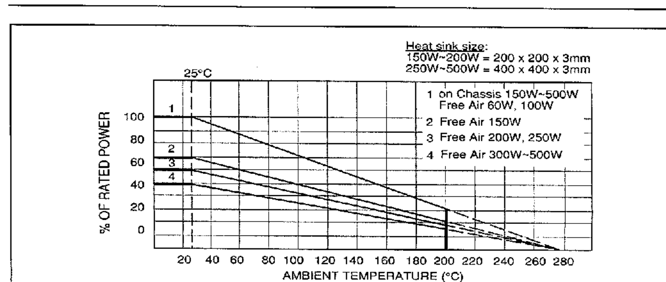
Power Derating Curve – IRH/IRV



Power Derating Curve – IRV600/1200



Power Derating Curve – IRF



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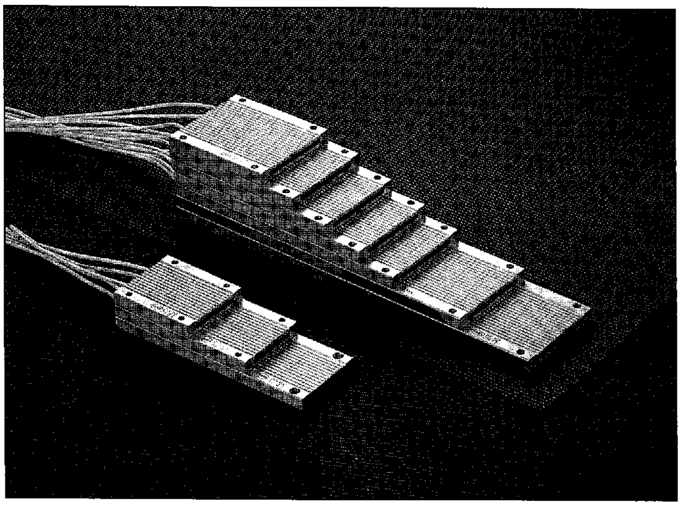
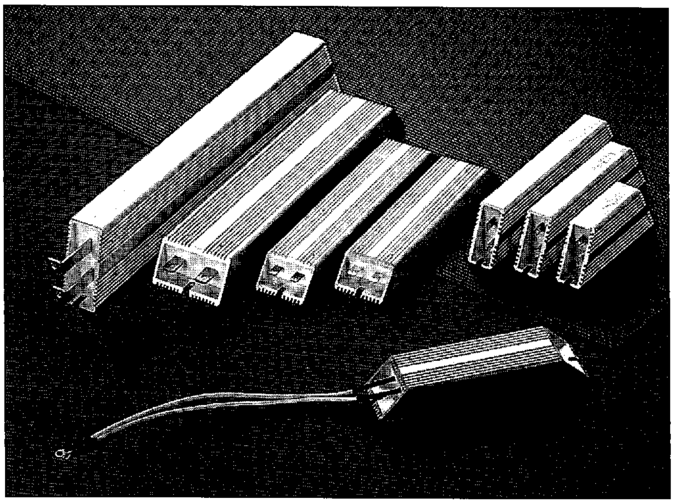


IRF 100W to 500W



IRH/IRV 60W to 500W

Product Information

Isotek's new series of high power, metal-clad wire wound resistors is designed for industrial and other applications that require high quality, rugged construction and excellent heat management. They are available in horizontal, vertical and flat configurations to accommodate a variety of applications and product designs.

Designated the IR series, these resistors may be used in snubber circuits to protect semiconductors in industrial instrumentation and motor drives, or as braking resistors.

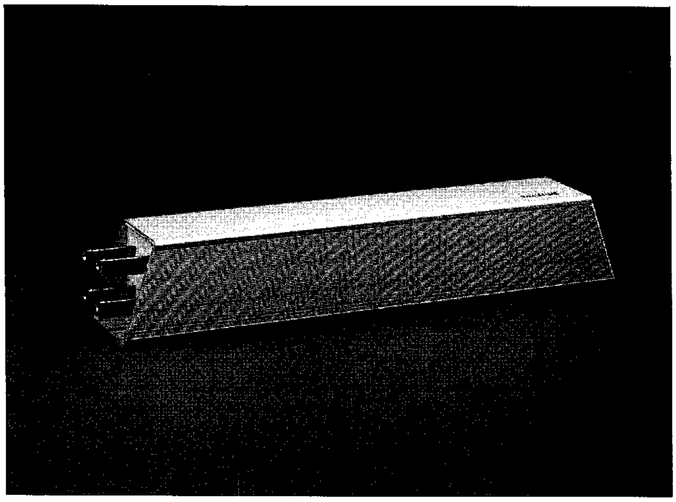
Typical applications also include use in power circuits for rapid transit trains, industrial vehicles, elevators, drilling equipment, audio amplifiers, telecommunications equipment, robotics and CNC controllers, as well as inverters.

Encapsulated in extruded aluminum housings that provide excellent heat dissipation, the IRH horizontal resistors and the IRV vertical resistors are available in nine power ratings from 60 to 500 watts. Resistance values range from 0.1ohm to 6.8K ohms. Each model is offered with standard and non-inductive windings. Both versions can be supplied with either high temperature-resistant lead wires or tab-type terminals. The resistors may be stacked for high power loads.

The IRV series of vertical resistors is also available with higher wattage ratings of 600, 800,1000 and 1200. They have two sets of terminals which can be connected in either serial or parallel.

The IRF series of flat metal-clad resistors is designed for use in motor drive, braking, and snubber applications and in power sources for industrial equipment. Available in seven power ratings from 100 to 500 watts, the IRF ranges in resistance values from 1 ohm to 5.87K ohms.

The flat extruded aluminum housing of the IRF facilitates heat dissipation and installation in narrow spaces. Several may be stacked together for high power loads. They are offered with standard or non-inductive windings and high temperature-resistant lead wires.



IRV 600W to 1200W

Isotek...the company

Founded in 1989, ISOTEK CORPORATION specializes in providing quality products and personalized service to the electronics industry.

Today, ISOTEK continues to respond aggressively to a diverse and rapidly expanding market with the introduction of the RARA line of metal clad wire wound resistors.

RARA ELECTRONICS COMPANY (Korea) has been recognized for engineering excellence and innovative power resistor design.

Backed by more than 25 years of sales experience and an expanded line, ISOTEK is now able to offer a wider range of solutions with cost-effective precision products.

For more information, please contact us:

Phone:	508-673-2900
Fax:	508-676-0885
Internet:	http://www.isotekcorp.com
E-mail:	tekinfo@isotekcorp.com