OHMITE High Voltage Flip Chip Film Resistors

High Voltage Flip Chip Series incorporates high accuracy screen printing technology to achieve high voltage capability in a stable flip chip SMD chip resistor package. The HVF Series offers unmatched performance in comparison to standard chip resistors. Its unique design provides lower voltage and temperature coefficients, less noise, tighter tolerances, better stability, higher resistance values and high voltage ratings. HVF is available in convenient 1206 and 2512 footprints.

Features: • Working Temperature Range: -55°C ~ 200°C
Specifications: • Temperature Coefficient: ±100ppm standard
Performance Data: • Overload: 1,5 x Pnom, 5 seconds (do not exceed maximum voltage) • Load Life: 1000 hours at rated power (IEC 115-1)

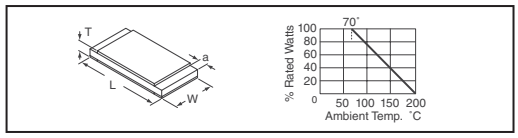
HVF1206T( )FE — RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
25K (2502)	250K (2503)	1.5M (1504)	5M (5004)	10G (1008)
50K (5002)	500K (5003)	2M (2004)	7.5M (7504)	
100K (1003)	1.0M (1004)	2.5M (2504)	1.0G (1007)	

HVF2512T( )FE — RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
25K (2502)	250K (2503)	1.5M (1504)	5M (5004)	5G (5007)
50K (5002)	500K (5003)	2M (2004)	7.5M (7504)	
100K (1003)	1.0M (1004)	2.5M (2504)	1.0G (1007)	

Series	Package Size	Power Rating (mW)	Voltage Rating	Dimensions (inch ±0.008) L	W	a	T (max.)
HVF1206	1206	300	1,500	0.128	0.063	0.018	0.028
HVF2512	2512	1,000	3,000	0.252	0.126	0.026	0.032



Series	Package Size	Resistance Range (Ω)	Tolerance	Digi-Key Part No.†	Bulk Price Each 1	50	100	Ohmite Part No.†
HVF1206	1206	25K ~ 10G	1%	HVF1206T(Code)FEBK-ND	2.87	2.58	2.30	HVF1206T(Code)FE
HVF2512	2512	25K ~ 5G	1%	HVF2512T(Code)FEBK-ND	2.95	2.65	2.36	HVF2512T(Code)FE

† For complete part number, substitute the code from Resistance Value Charts for (Code).

TL88 Series – Heat Sinkable Thick Film Power Resistors

The TL88 Series add heat sinkable options to the thick film resistor family. The resistor element is packaged with plastic insulators and quick-connect terminals in a symmetrical aluminum profile for easy heat sink mounting. Self-insulating package design increases voltage withstanding characteristics when compared to traditional aluminum housings. The in-line mounting profile makes the TL88 Series easily adaptable to most heat sink systems. Thermal compound is always recommended when heat sinking.

Features: • Very low inductance • In-Line Mounting Profile • 1/4" Quick connect terminals • Low profile design

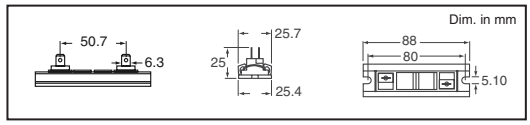
Applications: • Semiconductor Balancing • Frequency Converters • In-Rush Current Limiter • Snubber • Bleeder Resistor • Power Switching • Voltage Dividers

Material Specifications: • Resistive Element: Thick film on alumina • Housing: Aluminum • Insulators: Glass reinforced high temperature Valox® • Terminals: Tinned brass

Electrical Specifications: • Tolerance: ± 10% Standard • Temperature Coefficient: ±250PPM • Working Voltage: 1200VAC • Temperature Limits: -40°C ~ 125°C • Air Distance, Terminal to Ground: 7mm • Maximum Voltage Between Terminal: 2500V • Inductance: 50-100nH

RESISTANCE VALUE CHART

Value (Code)	Value (Code)
5 (5R00)	47 (47R0)
10 (10R0)	50 (50R0)
15 (15R0)	100 (100R)



Resistance Range (Ω)	Wattage§	Digi-Key Part No.†	Price Each 1	10	50	100
15	114	TL88K(Code)-ND	20.15	18.93	17.71	16.49
RoHS Compliant						
5 ~ 100	114	TL88K(Code)E-ND	44.76	26.86	17.91	13.43

§ Standard wattage for properly heat sinked resistors.
† For complete part number, substitute the corresponding code from Resistance Value Chart for (Code).

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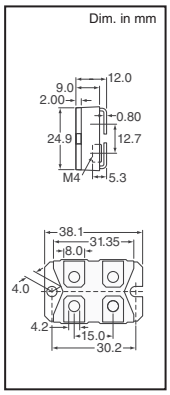
TGH Series Resistors – 100, 120 and 200 Watt



100W – RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)
.0005 (R0005)	.005 (R0050)	.02 (R0200)	.075 (R0750)
.001 (R0010)	.01 (R0100)	.025 (R0250)	.1 (R1000)
.002 (R0020)	.015 (R0150)	.05 (R0500)	

120W – RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)
.10 (R100)	33 (33R0)	500 (500R)	10.0K (10K0)
1.0 (1R00)	50 (50R0)	680 (680R)	
5.0 (5R00)	100 (100R)	1.0K (1K00)	
10 (10R0)	150 (150R)	5.0K (5K00)	

200W – RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)
.10 (R100)	25 (25R0)	500 (500R)	10.0K (10K0)
.50 (R500)	33 (33R0)	680 (680R)	
1.0 (1R00)	100 (100R)	1.0K (1K00)	
10 (10R0)	150 (150R)	5.0K (5K00)	

Due to a non-inductive design, these resistors are ideally suited for high frequency and pulse load applications. By direct mounting on a heat sink, significant cost advantages can be realized.

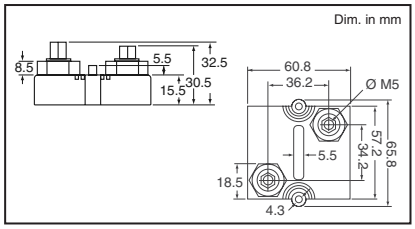
Material Specifications: • Heat Sink: Nickel-plated Copper • Contacts: Nickel-plated Copper • Molding Compound: High performance epoxy compliant to UL 94V-0

Electrical Specifications: • Tolerance: 5% • Temperature Coefficient: ±250 (at 105°C ref. to 25°C) • Maximum Working Voltage: 500V • Working Temperature Range: -55°C ~155°C

Wattage	Resistance Range (Ω)	Digi-Key Part No.†	Price Each 1	10	20	100
Precision Current Sense Resistors						
100	.0005 ~ .02	TGHGC(Code)FE-ND	21.79	19.82	18.01	17.00
	.025 ~ .1	TGHGC(Code)FE-ND	29.55	26.87	24.43	23.01
Thick Film Power Resistors						
120	.10 ~ 1.0	TGHHV(Code)JE-ND	34.51	31.38	28.53	26.64
	5.0	TGHHV5R00JE-ND	31.14	28.31	25.73	24.03
	10 ~ 10K	TGHHV(Code)JE-ND	30.25	27.51	25.01	23.35
200	.10 ~ 1.0	TGHLV(Code)JE-ND	42.85	38.95	35.42	33.07
	10 ~ 10K	TGHLV(Code)JE-ND	37.30	33.92	30.83	28.78

† For complete part number, substitute the corresponding code from Resistance Value Chart for (Code).

TAP600 Heat Sinkable Planar Resistors – 600 Watt



TAP600 delivers 600 watts of reliable power to a variety of power conditioning, power transmission, and power control applications.

Features: • Dielectric Strength: Up to 12KV • Special Design for Low Inductive and Capacitance Values • Easy termination to contacts with M5 screws • Calibrated Mounting simplifies assembly **Electrical Specifications:** • Resistance Tolerance: ±10% Standard • Maximum Operating Voltage: 5000VDC • Power Rating: 600W at 70°C heat sink temperature • Temperature Coefficient: ±150ppm/°C • Operating Temperature Range: -55°C ~ 150°C • Electric Strength Voltage: Up to 12000Vrms, 50HZ, 1 minute @ 500V • Insulation Resistance: 10GΩ minimum at 500V • Air Distance: 14mm minimum • Inductance: ≤ 80nH

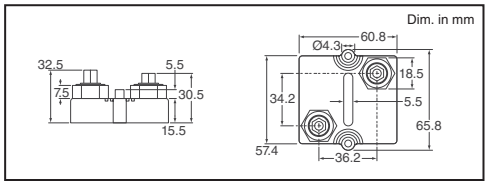
RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)
1.0 (1R0)	5.0 (5R0)	50 (50R)	10000 (10K)
2.0 (2R0)	10 (10R)	75 (75R)	
3.0 (3R0)	22 (22R)	100 (100)	
4.0 (4R0)	30 (30R)	1000 (1K0)	

Resistance Range (Ω)	Digi-Key Part No.†	Price Each 1	10	25	50
1.0 ~ 10,000	TAP600K(Code)E-ND	100.33	78.07	71.57	60.74

† For complete part number, substitute the corresponding code from Resistance Value Chart for (Code).

TAP800 Heat Sinkable Planar Resistors – 800 Watt



Ohmite's TAP800 Series dissipates 800 watts of power when used with a liquid or air cooled heat sink system.

Applications:
• Variable speed drivers • Power supplies • Robotics • Motor control • Control devices • Power designs

RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)
1.0 (1R0)	50 (50R)	680 (680)	10000 (10K)
5.0 (5R0)	100 (100)	1000 (1K0)	
10 (10R)	220 (220)	2700 (2K7)	
15 (15R)	390 (390)	5000 (5K0)	

Resistance Range (Ω)	Digi-Key Part No.†	Price Each 1	10	25	50
1.0 ~ 5,000	TAP800K(Code)E-ND	98.84	94.89	91.20	80.97
10,000	TAP800K10KE-ND	150.84	144.68	137.73	134.18

† For complete part number, substitute the corresponding code from Resistance Value Chart for (Code).

Free shipping on orders over €65! ***All prices in euro and include duties.***