Metal Glaze™ General Purpose Surface Mount Power Resistors

TT electronics
Welwyn Components

CHP Series

- **Up to 2 watts**
- **0.1 ohm to 2.2 megohm range**
- **Up to 1000 volts**
- **150°C maximum operating temperature**

Electrical Data

Type	Maximum Power Rating (watts)	Working Voltage[1] (volts)	Maximum Voltage (volts)	Resistance Range[2] (ohms)	Tolerance (±%)[2]	TCR (ppm/°C)[2]	Product Category
CHP1/8	0.25 @ 70°C	200	400	0R1 to 0R99	1, 2, 5	100	Low Range
				1R0 to 1M	1, 2, 5	50, 100	Standard
				20R to 348K	0.25, 0.5	50, 100	Tight Tolerance
CHP1/2	0.5 @ 70°C	300	600	0R1 to 0R99	1, 2, 5	100	Low Range
				1R0 to 348K	1, 2, 5	50, 100	Standard
CHP1	1 @ 70°C	350	700	0R1 to 0R99	1, 2, 5	100	Low Range
				1R0 to 2M21	1, 2, 5	50, 100	Standard
				20R to 348K	0.25, 0.5	50, 100	Tight Tolerance
CHP2	2 @ 25°C 1.33 @ 70°C	500	1000	0R1 to 0R99	1, 2, 5	100	Low Range
				1R0 to 2M21	1, 2, 5	50, 100	Standard

[1] Not to exceed $\sqrt{PxR}$
[2] Consult factory for tighter TCR, tolerance or resistance values

Performance Characteristics

Characteristics	Maximum Change	Test Method
Temperature	As Specified	MIL-R55342E Par 4.79 (-55°C =125°C)
Thermal Shock	±0.5% +0.01 ohm	MIL-R55342E Par 4.7.3 (-65°C +150°C, 5 cycles)
Low Temperature Operation	±0.25% +0.01 ohm	MIL-R-55342E Par 4.7.4 (-65°C @ working voltage)
Short Time Overload	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.5
	+1% for R>100K ohm	2.5 x $\sqrt{PxR}$ for 5 seconds
High Temperature Exposure	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.6 (+150°C for 100 hours)
Resistance to Bonding Exposure	±0.25% 0.01 ohm	MIL-R-55342E Par 4.7.7 (Reflow soldered to board at 260°C for 10 seconds)
Solderability	95% minimum coverage	MIL-STD-202, Method 208 (245°C for 5 seconds)
Moisture Resistance	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.8 (10 cycles, total 240 hours)
Life Test	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.10 (2000 hour at 70°C intermittent)
Terminal Adhesion Strength	±1% +0.01 ohm no mechanical change	1200 gram push from underside of mounted chip for 60 seconds
Resistance to Board Bending	±1% +0.01 ohm	Chip mounted in center of 90mm long board, deflected 5mm so as to exert pull on chip for 10 seconds

General Note
Welwyn Components reserves the right to make changes in product specification without notice or liability.
All information is subject to Welwyn's own data and is considered accurate at time of going to print.

Telephone: +44 (0) 1670 822181 · Facsimile: +44 (0) 1670 829465 · Email: info@welwyn-tt.com · Website: www.welwyn-tt.com

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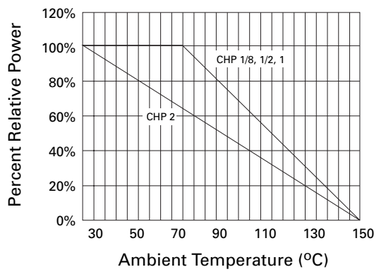
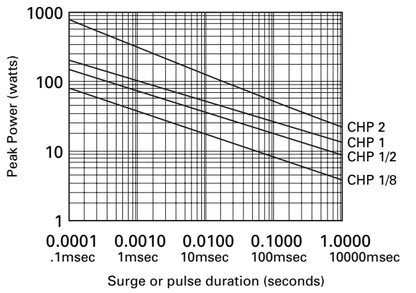
CHP Power Derating Curve



CHP Repetitive Surge Curve



Note: Use for repetitive pulses where the average power dissipation is not to exceed the component rating at 70°C. Surge handling capacity for low-repetitive surges may be significantly greater than shown above. Contact factory for recommendations.

Physical Data

Size Code	Industry Footprint	Dimensions (mm)		
		L	W	C
CHP1/8	**1206**	3.25±0.18	1.45±0.15	0.51±0.25
CHP1/2	**2010**	5.08±0.25	2.01±0.15	0.761±0.25
CHP1	**2512**	6.38±0.25	2.01±0.15	1.02±0.25
CHP2	**3610**	9.32±0.25	2.67±0.15	1.27±0.25

Ordering Procedure

Example: CHP1 at 100 ohms, 1% tolerance and 100ppm/°C on a reel of 1500 pieces -

C H P 1 – 1 0 0 R F I

Type

Size

TCR

	100ppm/ °C
- 50	50ppm/ °C

Value (use IEC62 code)

Tolerance (use IEC62 code)

C	0.25%	G	2%
D	0.5%	J	5%
F	1%		

Packing

I	Tape	CHP1/8	2500/reel	Standard
		CHP1/2, CHP1, CHP2	1500/reel	

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