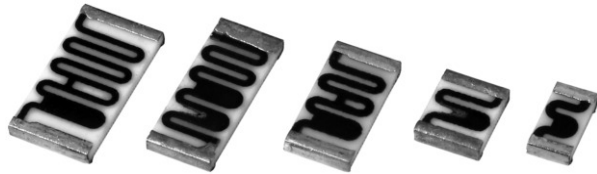


Thick Film Chip Resistors, High Voltage


FEATURES

- High voltage up to 3000 V
- Outstanding stability < 0.5 %
- Flow solderable
- Custom sizes available
- Automatic placement capability
- Available with either wraparound terminations or as a single termination flip chip
- Tape and reel packaging available
- Internationally standardized sizes
- Suitable for solderable, epoxy bondable, or wire bondable applications
- Termination: Gold, palladium silver, platinum gold, platinum silver, platinum palladium gold or solder-coated nickel barrier available
- Multiple styles, termination materials and configurations, allow wide design flexibility
- Non-magnetic terminations available
- Lead (Pb)-free version is RoHS compliant


RoHS*
 COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	RESISTANCE (1) (Ω)	POWER RATING (W)	VOLTAGE RATING (V) (max.)
CRHV1206	2M - 8G	0.300	1500
CRHV1210	4M - 10G	0.450	1750
CRHV2010	6M - 35G	0.500	2000
CRHV2510	10M - 40G	0.600	2500
CRHV2512	12M - 50G	0.700	3000

Notes

(1) Resistance values below 1 G Ω are calibrated at 100 V_{DC}, and values of 1 G Ω and above are calibrated at 1000 V_{DC}. Calibration at other voltages available upon request.

- For non-standard sizes, lower values or higher power rating requirement, contact factory

ELECTRICAL SPECIFICATIONS

(Reference only. Not for all values specified. Consult factory for your size and value.)

Resistance Range: 2 M Ω to 50 G Ω

Resistance Tolerance: $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$, $\pm 20\%$

Temperature Coefficient: ± 100 ppm/ $^{\circ}$ C (-55 $^{\circ}$ C to +150 $^{\circ}$ C)

Voltage Rating: 1500 V - 3000 V

Short Time Overload: Less than 0.5 % ΔR

MECHANICAL SPECIFICATIONS

Construction: 96 % alumina substrate with proprietary element resistance element and specified termination material

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: -55 $^{\circ}$ C to +100 $^{\circ}$ C

Life: Less than 0.5 % change when tested at full rated power

(Reference only. Not for all values specified. Consult factory for your size and value.)

VOLTAGE COEFFICIENT OF RESISTANCE CHART

SIZE	VALUE (Ω)	VCR (ppm/V)	FURTHER INSTRUCTIONS
CRHV1206	2M to 199M	25	Values over 200M, consult factory
CRHV1210	4M to 200M	25	Values over 200M, consult factory
CRHV2010	6M to 99M	15	Values over 1G, consult factory
	100M to 1G	20	
CRHV2510	10M to 99M	10	Values over 1G, consult factory
	100M to 1G	15	
CRHV2512	12M to 999M	10	Values over 5G, consult factory
	1G to 5G	25	

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CRHV1206AF100MFKFB (preferred part number format)

C R H V 1 2 0 6 A F 1 0 0 M F K F B

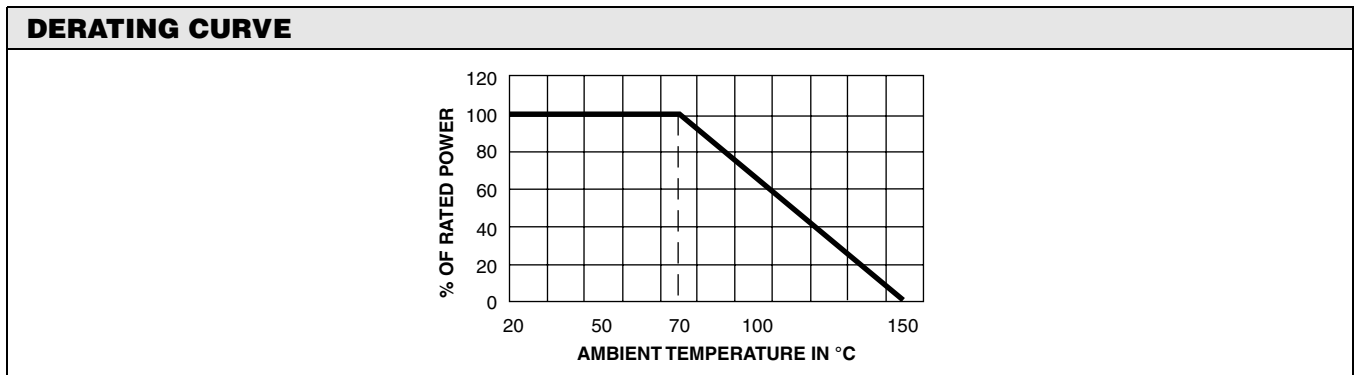
GLOBAL MODEL	SIZE	TERM STYLE	TERM MATERIAL	RESISTANCE VALUE	TOLERANCE	TCR	SOLDER TERMINATION	PACKAGING
CRHV	1206 1210 2010 2510 2512	A = 3-sided B = top only C = 5-sided	A = Palladium silver B = Platinum gold C = Gold D = Platinum silver E = Platinum palladium gold F = Nickel barrier	M = Million G = Billion 4M70 = 4.7 M Ω 10M0 = 10 M Ω 1G00 = 1 G Ω	F = $\pm 1.0\%$ G = $\pm 2.0\%$ J = $\pm 5.0\%$ K = $\pm 10.0\%$ M = $\pm 20.0\%$	K = 100 ppm N = 200 ppm W = 350 ppm P = 500 ppm	E = Sn100 F = Sn95/Ag5 N = No solder S = Sn62/Pb36/Ag2 T = Sn90/Pb10	B = Bulk T = Tape and reel W = Waffle

Historical Part Numbering: CRHV1206AF1006F100e2 (will continue to be accepted)

CRHV	1206	A	F	1006	F	100	e2
HISTORICAL MODEL	SIZE	TERM STYLE	TERM MATERIAL	RESISTANCE VALUE	TOLERANCE	TCR	SOLDER TERMINATION

* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS in inches [millimeters]			
Termination Style A (3-sided wraparound)	Termination Style B (Top conductor only)		
Termination Style C (5-sided wraparound)	MODEL	LENGTH (L) ± 0.006 [0.152]	WIDTH (W) ± 0.006 [0.152]
		THICKNESS (T) ± 0.002 [0.051]	
	CRHV1206	0.125	0.063
	CRHV1210	0.125	0.100
	CRHV2010	0.200	0.100
	CRHV2510	0.250	0.100
	CRHV2512	0.250	0.126



(Reference only: Not for all values specified. Consult factory for your size and value.)

TYPE	TERMINATION MATERIAL	TERMINATION STYLE	TERMINATION STYLE/ MATERIAL CODE	SOLDER TERMINATION CODE
Solderable	Nickel barrier	3-sided (wraparound)	AF	E, F, S, or T ⁽³⁾
		Top only (flip chip)	BF	
Wire bondable/ Solderable	Platinum palladium gold	3-sided (wraparound)	AE	N, F or S ⁽¹⁾
		Top only (flip chip)	BE	
		5-sided (wraparound)	CE	
Wire bondable/ Epoxy bondable	Gold	3-sided (wraparound)	AC	N
		Top only (flip chip)	BC	
		5-sided (wraparound)	CC	
Epoxy bondable	Palladium silver ⁽²⁾	3-sided (wraparound)	AA	N
		Top only (flip chip)	BA	
		5-sided (wraparound)	CA	
	Platinum gold	3-sided (wraparound)	AB	
		Top only (flip chip)	BB	
		5-sided (wraparound)	CB	
	Platinum silver	3-sided (wraparound)	AD	
		Top only (flip chip)	BD	
		5-sided (wraparound)	CD	

Notes

- ⁽¹⁾ Use solder termination N for applications requiring wire bondable mounting, and solder terminations F or S for applications requiring solderable mounting.
- ⁽²⁾ While not recommended, palladium silver terminations could be used for solderable applications when using a solder alloy containing silver.
- ⁽³⁾ Standard solder plating for the nickel barrier parts are solder terminations E or T. Hot solder dipped terminations F or S are also available.



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.