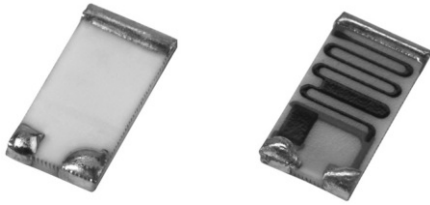


Thick Film Chip Dividers, High Voltage



ELECTRICAL SPECIFICATIONS

Resistance Range: 1 M Ω to 20 G Ω

Resistance Tolerance: $\pm 1\%$ to $\pm 20\%$

Power Rating: See table

Voltage Coefficient: See table

Temperature Coefficient: See table

Ratio Tracking: See table

MECHANICAL SPECIFICATIONS

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

FEATURES

- High voltage up to 3000 V
- Typical resistance ratios of 250:1, 500:1, etc.
- Flow solderable
- Tape and reel packaging available
- Available with either wraparound terminations or as a single termination flip chip
- 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

ENVIRONMENTAL SPECIFICATIONS

Operating temperature: - 55 °C to + 150 °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.)

STANDARD ELECTRICAL SPECIFICATIONS

RESISTANCE (Ω) ⁽¹⁾	POWER RATING (mW)	VOLTAGE RATING (V max.)
20M to 20G	contact factory	3000

Note

⁽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.

VOLTAGE AND TEMPERATURE COEFFICIENTS OF RESISTANCE CHART TYPICAL

RESISTANCE (Ω)	RATIO (typical)	VCR (ppm/V)	TCR (ppm/°C) - 55 °C to + 150 °C
20M	250:1	5	260
150M	300:1	5	80
800M	300:1	10	50
20G	700:1	90	160

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: CDHVAA20M0J2500GFB (preferred part number format)

C	D	H	V	A	A	2	0	M	0	J	2	5	0	0	G	F	B
GLOBAL MODEL	TERM STYLE	TERM MATERIAL				RESISTANCE VALUE (R1)		TOLERANCE		RATIO R1/R2		RATIO TOLERANCE		SOLDER TERMINATION		PACKAGING	
CDHV = CDHV2512	A = 3-sided B = top only	A = Palladium silver B = Platinum gold C = Gold D = Platinum silver E = Platinum palladium gold F = Nickel barrier				M = Million G = Billion 20M0 = 20 MΩ 800M = 800 MΩ 20G0 = 20 GΩ		F = ± 1.0 % G = ± 2.0 % H = ± 3.0 % J = ± 5.0 % K = ± 10.0 % M = ± 20.0 %		3 digit significant figure, followed by a multiplier 2500 = 250:1 3000 = 300:1 7000 = 700:1		F = ± 1.0 % G = ± 2.0 % H = ± 3.0 % J = ± 5.0 %		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: CDHV2512AA2005J2500Ge2 (will continue to be accepted)

CDHV2512	A	A	2005	J	2500	G	e2
HISTORICAL MODEL	TERM STYLE	TERM MATERIAL	RESISTANCE VALUE (R1)	TOLERANCE	RATIO R1/R2	RATIO TOLERANCE	SOLDER TERMINATION

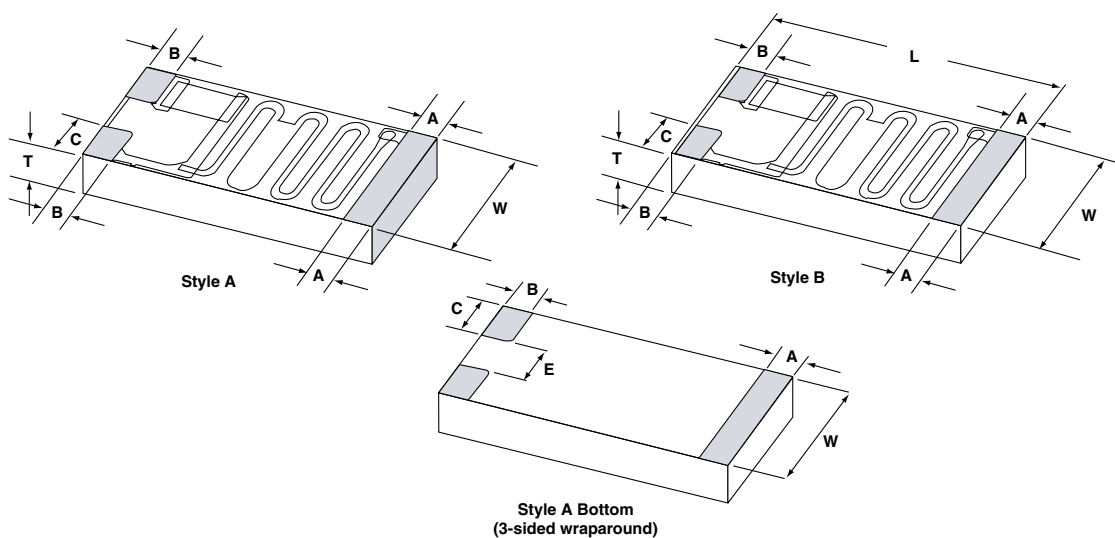
* Pb containing terminations are not RoHS compliant, exemptions may apply

RATIO TRACKING (ppm/°C)

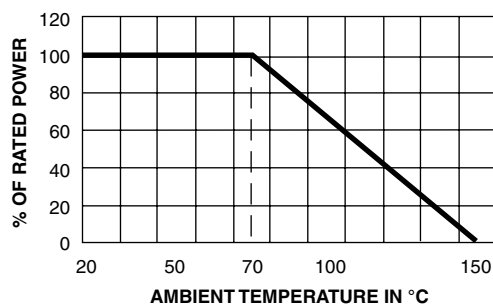
RESISTANCE (Ω)	RATIO (typical)	COLD (+ 25 °C to - 50 °C)	HOT (+ 25 °C to + 150 °C)
20M	250:1	5	260
150M	300:1	5	80
800M	300:1	10	50
20G	700:1	90	160

Note

- Contact factory for other ratios

DIMENSIONS in inches [millimeters]

TERMINATION	LENGTH (L) ± 0.006 [0.152]	WIDTH (W) ± 0.006 [0.152]	THICKNESS (T) ± 0.002 [0.051]	A ± 0.005	B ± 0.005	C ± 0.005	E ± 0.005
STYLE A (wraparound 3 sided)	0.250	0.126	0.025	0.025	0.025	0.040	0.046
STYLE B (top only)	0.240	0.126	0.025	0.025	0.025	0.040	-

DERATING CURVE

(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	
Wire bondable/ Epoxy bondable	Gold	3-sided (wraparound)	AC	N
		Top only (flip chip)	BC	
Epoxy bondable	Palladium silver ⁽²⁾	3-sided (wraparound)	AA	N
		Top only (flip chip)	BA	
	Platinum gold	3-sided (wraparound)	AB	
		Top only (flip chip)	BB	
	Platinum silver	3-sided (wraparound)	AD	
		Top only (flip chip)	BD	

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.



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