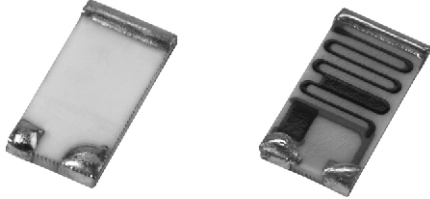


# Thick Film Chip Dividers, High Voltage



## FEATURES

- High voltage up to 3000 V
- Typical resistance ratios of 250:1, 500:1, etc.
- Flow solderable
- Tape and reel packaging available
- Termination style: 3-sided wraparound termination or single termination flip chip available
- Suitable for solderable, epoxy bondable, or wire bondable applications
- Termination material: Solder-coated nickel barrier standard; gold, palladium silver, platinum gold, platinum silver or platinum palladium gold terminations available
- Multiple styles, termination materials and configurations, allow wide design flexibility
- Non-magnetic terminations available
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### Note

\* Lead (Pb)-containing terminations are not RoHS-compliant. Exemptions may apply.

STANDARD ELECTRICAL SPECIFICATIONS							
GLOBAL MODEL	CASE SIZE	POWER RATING $P_{70^\circ\text{C}}$ W	MAXIMUM WORKING VOLTAGE <sup>(1)</sup> V	RESISTANCE RANGE <sup>(2)</sup> $\Omega$	TOLERANCE <sup>(3)</sup> $\pm$ %	TEMPERATURE COEFFICIENT <sup>(4)</sup> (- 55 °C to + 150 °C) $\pm$ ppm/°C	TCR TRACKING $\pm$ ppm/°C
CDHV 2512	2512	Contact factory	3000	20M to 20G	1, 2, 5, 10, 20	100	50 (typical)

### Notes

- (1) Continuous working voltage shall be  $\sqrt{P \times R}$  or maximum working voltage, whichever is less.
- (2) Resistance values are calibrated at 100 V<sub>DC</sub>. Calibration at other voltages available upon request. Contact factory for lower values.
- (3) Contact factory for tighter tolerances.
- (4) Reference only: Not for all values specified. Consult factory for your value.

VOLTAGE AND TEMPERATURE COEFFICIENTS OF RESISTANCE CHART TYPICAL			
RESISTANCE ( $\Omega$ )	RATIO (TYPICAL)	VCR (ppm/V)	TCR (ppm/°C) - 55 °C to + 150 °C
20M	250:1	10	100
150M	300:1	10	150
800M	500:1	10	200

### Note

- Contact factory for other ratios.

GLOBAL PART NUMBER INFORMATION									
New Global Part Numbering: CDHVAF20M0J2500GFB (preferred part number format)									
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	F = Nickel barrier A = Palladium silver B = Platinum gold C = Gold D = Platinum silver E = Platinum palladium gold	M = M $\Omega$ G = G $\Omega$ 20M0 = 20 M $\Omega$ 800M = 800 M $\Omega$ 1G00 = 1 G $\Omega$	F = $\pm$ 1 % G = $\pm$ 2 % J = $\pm$ 5 % K = $\pm$ 10 % M = $\pm$ 20 %	3 digit significant figure, followed by a multiplier 2500 = 250:1 3000 = 300:1 5000 = 500:1	G = $\pm$ 2 % H = $\pm$ 3 % J = $\pm$ 5 %	D = Sn95/Ag5, HSD E = Sn100 F = Sn95/Ag5 N = No solder S = Sn62/Pb36/Ag2, HSD T = Sn90/Pb10	B = Bulk F = T/R (full reel) 1 = T/R (1000 pcs) 5 = T/R (500 pcs) T = T/R (250 pcs min.) W = Waffle tray	
Historical Part Numbering: CDHV2512AF2005J2500Ge2 (will continue to be accepted)									
CDHV2512	A	F	2005	J	2500	G	e2		
HISTORICAL MODEL	TERM STYLE	TERM MATERIAL	RESISTANCE VALUE (R1)	TOLERANCE	RATIO R1/R2	RATIO TOLERANCE	SOLDER TERMINATION		

### Note

- For additional information on packaging, refer to the Surface Mount Resistor Packaging document ([www.vishay.com/doc?31543](http://www.vishay.com/doc?31543)).

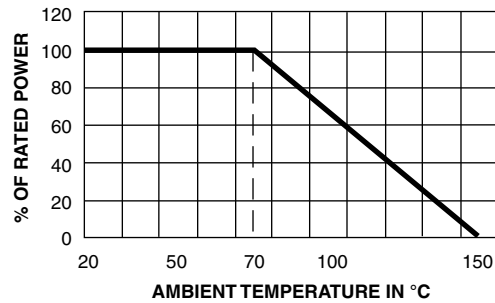
MECHANICAL SPECIFICATIONS	
Resistive element	Ruthenium oxide
Encapsulation	Glass
Substrate	96 % alumina
Termination	Solder-coated nickel barrier standard. Gold, palladium silver, platinum gold, platinum silver, platinum palladium gold terminations available.
Solder finish	Pure tin or tin/lead solder alloys standard. Tin/silver or tin/lead/silver solder alloys available.

**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.)

DIMENSIONS in inches (millimeters)							
TERMINATION	LENGTH (L) ± 0.006 (0.152)	WIDTH (W) ± 0.006 (0.152)	THICKNESS (T) ± 0.005 (0.127)	A ± 0.005	B ± 0.005	C ± 0.005	E ± 0.005
STYLE A (3-sided wraparound)	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**

**Note**

- (Reference only: Not for all values specified. Consult factory for your specific value.)

TYPE	TERMINATION MATERIAL	TERMINATION STYLE	TERMINATION STYLE/ MATERIAL CODE	SOLDER TERMINATION CODE
Solderable	Nickel barrier	3-sided (wraparound)	AF	E or T (standard); D, F or S (optional) <sup>(3)</sup>
		Top only (flip chip)	BF	
Epoxy bondable/ solderable	Platinum palladium gold	Top only (flip chip)	BE	N (standard); D or S (optional) <sup>(1)</sup>
Wire bondable/ epoxy bondable	Gold	Top only (flip chip)	BC	N
Epoxy bondable	Palladium silver <sup>(2)</sup>	Top only (flip chip)	BA	N
	Platinum gold		BB	
	Platinum silver		BD	

**Notes**

- <sup>(1)</sup> Use solder termination N for applications requiring epoxy bondable mounting, and solder terminations D or S for applications requiring solderable mounting.
- <sup>(2)</sup> While not recommended, palladium silver terminations could be used for solderable applications when using a solder alloy containing silver. If the solder paste being used to solder the palladium silver terminated parts to the boards does not have a silver-based composition, then the silver in the terminations could begin to leach when it is exposed to liquidus non-silver-based solders, causing the potential for solderability and/or solder joint issues.
- <sup>(3)</sup> Standard solder plating for the nickel barrier parts are solder terminations E or T. Plated termination F and hot solder dipped terminations D or S are also available.



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