

HVCD SERIES

High Voltage Chip Dividers

Advantages

Our patented Micropen® precision printing technology provides superior precision, thick-film high voltage surface mount dividers. Ohmcraft's Micropenned serpentine patterned dividers produce superior electrical characteristics:

- Voltage Ratings to 4000 Volts
- Ultra High Stability
- TCR to 100 ppm/°C
- Resistance Values to 10 Gigohms
- Very Low Noise
- TCR Tracking to 25 ppm/°C
- Ratio Tolerances to 1%
- VCR to 1 ppm/V
- Custom Ratios and Configurations



Electrical Specifications

Case Size Ratings	TCR Tracking (±ppm/°C)	Ratio Tolerance 1%, 2%, 5%, 10%, 20%
3512 100 mW 2000V	25 50	40M-10G < 40M Voltage is Wattage Limited
4020 100 mW 3000V	25 50	90M-10G < 90M Voltage is Wattage Limited
5020 100 mW 4000V	25 50	160M-10G < 160M Voltage is Wattage Limited

For custom sizes and configurations, consult us.

How to Order

Ordering Code Example HVCD3512Z5005FT-R100

Type	Case Size	TCR Tracking*	R Total Value	Ratio Tolerance**	Termination	Ratio
High-Voltage Chip Divider	3512 4020 5020 See dimension table.	Y ±25ppm/°C Z ±50ppm/°C	Resistance value expressed as a four digit number, where the first three numbers are the significant value, and the fourth number is the number of zeroes.	F ±1.0% G ±2.0% J ±5.0% K ±10% L ±20%	T Solderable wraparound matte tin Sn99.9 on nickel barrier, RoHS B Solderable wraparound Sn63Pb37 solder over nickel barrier Z Solderable single surface matte tin Sn99.9 on nickel barrier, RoHS S Solderable single surface Sn63Pb37, flip-chip	(R total) / (R low) expressed up to a four digit number XXXX Max Ratio = 1000 Min Ratio = 100

*Absolute TCR is <100 ppm/°C

**Total Resistance Tolerance is ±15% (> 10GΩ ±20%)

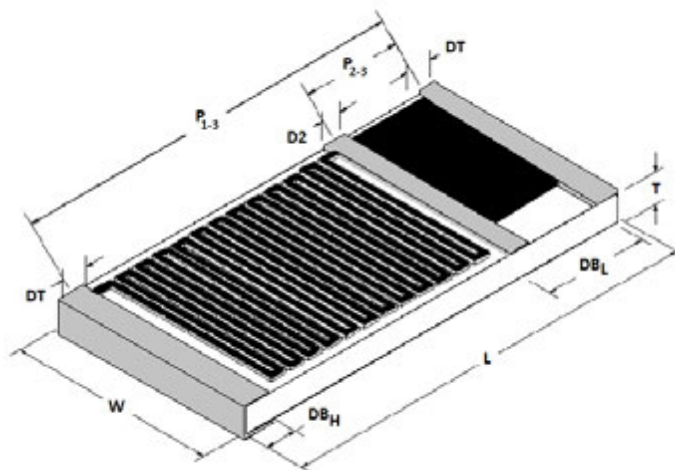
Packaging options: Bulk, Tape & Reel or Flat Pack

High Voltage Chip Resistors

HVCD SERIES

Chip Dimensions

Wrap-around
B and T Terminations



Case Size	Length	Width	Thickness (Max.)	DT	D2	DB _H	DB _L	P ₁₋₃	P ₂₋₃	Units
3512	0.350 +0.01/-0.005	0.125 ±0.005	0.030	0.020 ±0.010	0.020 ±0.010	0.020 ±0.010	0.065 ±0.010	0.330 +0.010	0.085 ±0.010	inches
	8.89 +0.25/-0.13	3.18 ±0.13	0.76	0.51 ±0.25	0.51 ±0.25	0.51 ±0.25	1.65 ±0.25	8.38 +0.25	2.16 ±0.25	mm
4020	0.400 +0.01/-0.005	0.200 ±0.005	0.030	0.025 ±0.010	0.020 ±0.010	0.025 ±0.010	0.070 ±0.010	0.375 +0.010	0.095 ±0.010	inches
	10.16 +0.25/-0.13	5.08 ±0.13	0.76	0.64 ±0.25	0.51 ±0.25	0.64 ±0.25	1.78 ±0.25	9.53 +0.25	2.41 ±0.25	mm
5020	0.500 +0.01/-0.005	0.200 ±0.005	0.030	0.025 ±0.010	0.020 ±0.010	0.025 ±0.010	0.070 ±0.010	0.475 +0.010	0.120 ±0.010	inches
	12.70 +0.25/-0.13	5.08 ±0.13	0.76	0.64 ±0.25	0.51 ±0.25	0.64 ±0.25	1.78 ±0.25	12.07 +0.25	3.05 ±0.25	mm

Typical Performance Characteristics

Test	Maximum ΔR
Short Time Overload	0.1%
Load Life	0.1%
Thermal Shock	0.1%
Resistance to Soldering Heat	0.05%

Parameter	Typical
Operating Temperature	-55°C to 150°C
TCR Tracking	Measured from 25°C to 75°C
Resistance Value	Measured at 100 VDC

Material Construction

Resistive Element	Thick Film
Substrate	96% Alumina
Encapsulation	Epoxy
Termination	Tin over nickel barrier or lead solder over nickel barrier

Tape and Reel Specifications

Parts are packaged in accordance with EIA-481 tape and reel specifications.
T&R White Side Up, Narrow DB_H Pad Towards Sprocket Holes

Custom Configurations Available Upon Request

Please consult us with our knowledgeable sales staff for help specifying custom parts to meet your needs.

Power Derating Curve

