

HVCD SeriesHigh 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
- Resistance Values to 10 Gigohms
- Ratio Tolerances to 1%

- Ultra High Stability
- Very Low Noise
- VCR to 1 ppm/V
- TCR to 100 ppm/°C
- TCR Tracking to 25 ppm/°C
- Custom Ratios and Configurations

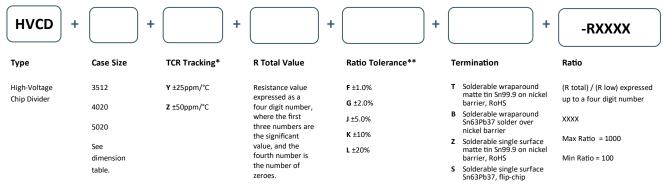
Electrical Specifications

| Case Size Ratings | TCR Tracking (±ppm/°C) | Ratio Tolerance 1%, 2%, 5%, 10%, 20% |
|----------------------|------------------------|---|
| 3512 | 25 | 40M-10G |
| 100 mW | F0 | 40MA Valtaga ia Wattaga Limitad |
| 2000V | 50 | < 40M Voltage is Wattage Limited |
| 4020 | 25 | 90M-10G |
| 100 mW | | |
| 3000V | 50 | < 90M Voltage is Wattage Limited |
| 5020 | 25 | 160M-10G |
| 100 mW | | |
| 4000V | 50 | < 160M Voltage is Wattage Limited |

For custom sizes and configurations, consult ohmcraftsales@exxelia.com.

How to Order

Ordering Code Example HVCD3512Z5005FT-R100



^{*}Absolute TCR is <100 ppm/°C

Packaging options: Bulk, Tape & Reel or Flat Pack



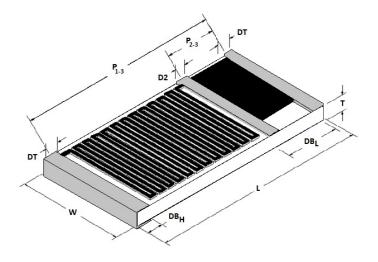
^{**}Total Resistance Tolerance is $\pm 15\%$ (> $10G\Omega \pm 20\%$)



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% | | |

Material Construction

Resistive Element Thick Film Substrate 96% Alumina Encapsulation Ероху

Termination Tin over nickel barrier or lead solder over

nickel barrier

Custom Configurations Available Upon Request

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

E: ohmcraftsales@exxelia.com

P: 585.624.2610 www.ohmcraft.com 93 Paper Mill St.

Honeoye Falls, NY 14472

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

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

Power Derating Curve



Ambient Temperature °C

