

# High Ratio Vertical PCB Mount Current Transformer

# Current Transformers

CR Magnetics **CR8300** Series of PCB Mounted Current Transformers are available in a wide range of sizes and materials to meet any AC current sensing needs. Our **General Purpose** designs are made from the highest quality silicon steel cores available, and meet most of the common AC current measurement needs. Our **Revenue Grade CTs (-N)** are made from a nickel alloy core which provides the most linear response over temperature and current level. The **High Frequency (-F)** products are designed for high frequency applications such as high frequency power supplies and motor drives. CR Magnetics offers **DC Immune (-D)** models that are designed to provide sensing of AC currents where DC offsets also exist. All products are offered in standard sizes, with the most popular turns ratios. UL, CSA, CE, and RoHS acceptance are all standard.

## CR8300 SERIES



### GENERAL PURPOSE VERTICAL PCB CURRENT TRANSFORMERS

Part Number	I <sub>F</sub>	V <sub>max</sub> RMS	T <sub>e</sub> (typ.)	DCR Ω	Frequency	Pin Diameter
CR8320-1600	10	1.8	1613	95	20 - 1 KHz	0.8 X 4.0 MM
CR8348-1000	20	7.0	1023	24	20 - 1 KHz	1.0 X 3.0 MM
CR8348-2000	50	13.7	2046	106	20 - 1 KHz	1.0 X 3.0 MM
CR8349-1000	50	11.6	1016	35	20 - 1 KHz	1.0 X 6.0 MM
CR8349-1500	75	15.5	1520	80	20 - 1 KHz	1.0 X 4.0 MM
CR8350-1000	100	16.5	1021	22	20 - 1 KHz	1.0 X 3.0 MM
CR8350-2000	200	31.0	2037	73	20 - 1 KHz	1.0 X 3.0 MM

### REVENUE GRADE VERTICAL PCB CURRENT TRANSFORMERS

Part Number	I <sub>F</sub>	V <sub>max</sub> RMS	T <sub>e</sub> (typ.)	DCR Ω	Frequency	Pin Diameter
CR8348-2500-N	40	7.5	2510	134	20 - 1 KHz	1.0 X 3.0 MM
CR8349-1000-N	50	5.1	1009	32	20 - 1 KHz	1.0 X 3.0 MM
CR8349-2500-N	75	11.2	2512	190	20 - 1 KHz	1.0 X 3.0 MM
CR8350-2500-N	100	10.5	2511	57	20 - 1 KHz	1.0 X 6.0 MM

### HIGH FREQUENCY VERTICAL PCB CURRENT TRANSFORMERS

Part Number	I <sub>F</sub>	V <sub>max</sub> RMS	T <sub>e</sub> (typ.)	DCR Ω	Frequency	Pin Diameter
CR8348-2000-F	50	3.7	2022	88	20 - 200KHz	1.0 X 6.0 MM
CR8349-2000-F	75	16.0	2024	109	20 - 200KHz	1.0 X 3.0 MM
CR8350-2000-F	100	10.0	2027	73	20 - 200KHz	1.0 X 3.0 MM

### DC IMMUNE VERTICAL PCB CURRENT TRANSFORMERS

Part Number	I <sub>F</sub>	V <sub>max</sub> RMS	T <sub>e</sub> (typ.)	DCR Ω	Frequency	Pin Diameter
CR8348-2000-D	50	4.0	2015	57	20 - 1 KHz	1.0 X 6.0 MM
CR8349-2000-D	75	7.6	2017	48	20 - 1 KHz	1.0 X 6.0 MM
CR8350-2000-D	100	6.3	2020	25	20 - 1 KHz	1.0 X 6.0 MM

I<sub>F</sub> = Maximum Input Current to be linearly sensed    V<sub>max</sub> = Maximum Voltage (Saturation) CT will develop  
 T<sub>e</sub> = Effective turns ratio including losses    (All Specifications tested at 60 Hz)

### PACKAGE AND PIN OUT DIMENSIONS (mm/in)

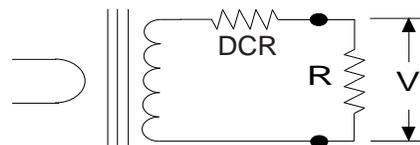
Part Number Prefix	A min	B max	C max	D max	E ±0.3	F ±0.3	G ±0.3	H typ
<b>CR8320</b>	5.5 .22	19.4 .76	19.5 .77	8.2 .32	12.7 .50	N/A	N/A	4.0 .16
<b>CR8348</b>	6.7 .27	23.5 .93	25 .98	11 .43	15.2 .60	9.5 .37	19 .75	1.90 .07
<b>CR8349</b>	9 .35	26 1.02	28 1.10	17 .67	15.2 .60	15.5 .61	19 .75	1.90 .07
<b>CR8350</b>	12.8 .50	37.5 1.48	39 1.54	14 .55	25.4 1.00	12.7 .50	33.02 1.30	3.81 .15

**Applications**  
 Motor Load Measurement  
 Power Meters  
 High Frequency Current Sensing

**Features**  
 High Ratio  
 Standard Footprints

**Specifications**  
 Maximum Continuous Primary Current    4 X I<sub>r</sub>  
 Insulation Voltage    3500 Vac/1min  
 Storage Temp.    -45°C thru +85 °C  
 Operating Temp. General Purpose & Nickel    -40°C thru +85 °C  
 Operating Temp. High Frequency    -40°C thru +65 °C

**Regulatory Agencies**



$$V = \frac{I \times R}{T_e} \quad V_L = V_{max} - \left[ \frac{I \times DCR}{T_e} \right]$$

For best linearity, choose R such that V < 0.8 V<sub>L</sub>

