

601 series

current sense transformers

PRODUCT DESCRIPTION

West Coast Magnetics' 601 series current sense transformers are designed to accurately sense current at frequencies from 10 kHz to 600 kHz. They feature excellent linearity up to rated peak current. Compact size is optimized to minimize board space in two packaging configurations: through hole horizontal and vertical mounts.

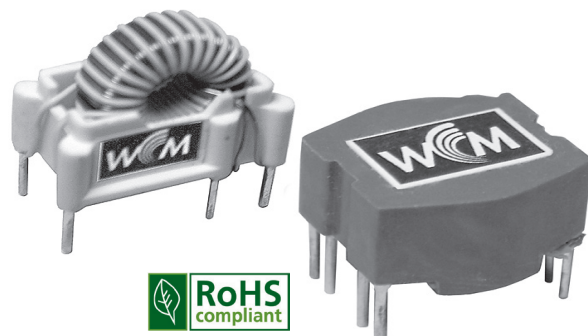
FEATURES & BENEFITS

Sense current to 30 amps — 10 kHz to 600 kHz operating frequency — Design assistance from West Coast Magnetics

Product Code	Turns	Minimum Inductance (mH)	DCR (Ω)	V out (Volts)	I in (amps)	Terminating Resistor (Ω)	Hypot (Vac)
601-1	25	0.57	0.07	1	1	25	3000
601-2	50	2.30	0.18	1	1	50	3000
601-3	100	9.10	0.57	1	1	100	3000
601-4	200	36.00	3.40	1	1	200	3000
601-5	25	0.83	0.18	1	1	25	3000
601-6	50	3.30	0.41	1	1	50	3000
601-7	100	13.20	1.31	1	1	100	3000
601-8	200	52.80	4.15	1	1	200	3000

PEAK SENSE CURRENT (amps) vs FREQUENCY OF OPERATION

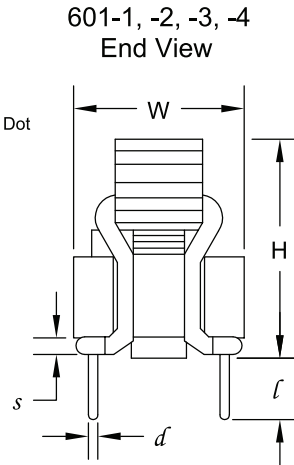
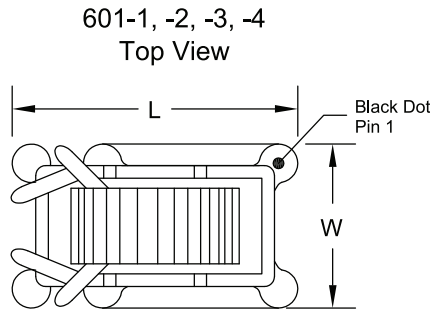
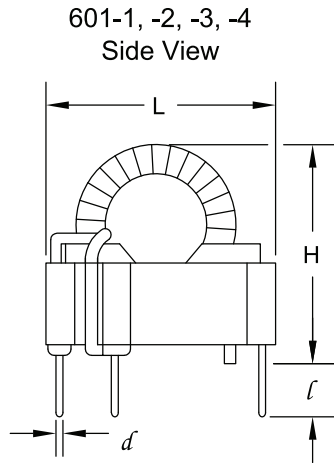
Product Code	50 kHz	100 kHz	200 kHz	400 kHz	600 kHz
601-1	—	—	30	30	30
601-2	—	30	30	30	—
601-3	30	30	—	—	—
601-4	30	—	—	—	—
601-5	—	—	30	30	30
601-6	—	30	30	30	—
601-7	30	30	—	—	—
601-8	30	—	—	—	—



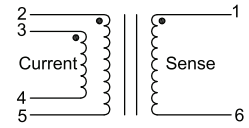
Notes:

1. For reliable performance at peak rated sense current, the sense windings must be connected in parallel to split the load.
2. For fully optimal performance, operate in recommended areas only. Within these ranges magnetizing current will be less than 1% of peak rated sense current and temperature rise will not exceed 40° C. Check with West Coast Magnetics for operation outside recommended areas.

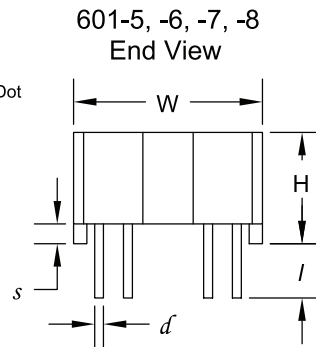
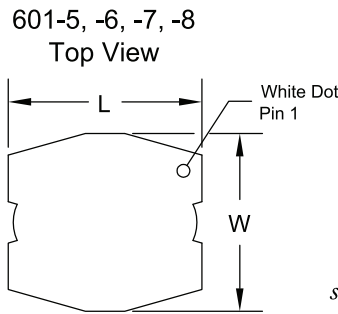
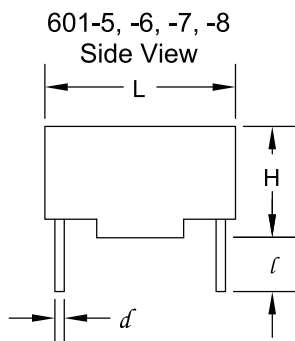
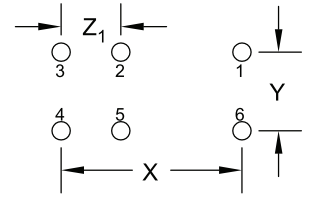
Dimensions: $\frac{\text{inches}}{\text{mm}}$



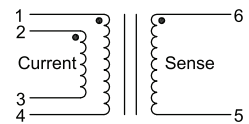
601-1, -2, -3, -4
Schematic



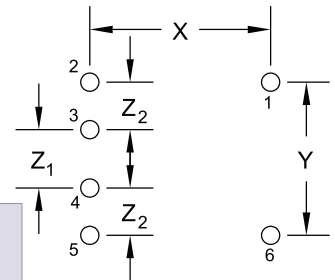
601-1, -2, -3, -4
PCB Layout



601-5, -6, -7, -8
Schematic



601-5, -6, -7, -8
PCB Layout



Product Code	L	W	H	s	l	d*	X	Y	Z ₁	Z ₂
601-1	<u>0.800</u>	<u>0.450</u>	<u>0.750</u>	<u>0.080</u>	<u>0.175</u>	<u>0.025</u>	<u>0.700</u>	<u>0.350</u>	<u>0.200</u>	NA
601-2	20.3	11.4	19.1	2.0	4.4	0.6	17.8	8.9	5.1	
601-3										
601-4										
601-5	<u>0.680</u>	<u>0.630</u>	<u>0.360</u>	<u>0.060</u>	<u>0.191</u>	<u>0.031</u>	<u>0.600</u>	<u>0.400</u>	<u>0.200</u>	<u>0.100</u>
601-6	17.3	16.0	9.1	1.5	4.9	0.79	15.2	10.2	5.1	2.5
601-7										
601-8										

Note: * 601-1, 601-2, 601-3, 601-4 — .025" square pin

* 601-5, 601-6, 601-7, 601-8 — .031" round pin

Note: All materials of construction minimum Class B 130° C rated.