

## Wireless Charging Transmitter Coil/Shield



### COIL DESCRIPTION

TURNS	MATERIAL	LEAD LENGTH	TINNED LENGTH
2 layers	26 x 40 AWG, (0.08 mm diameter)	40 mm	5 mm
10 turns each			

### FEATURES

- Wireless charging transmitter coil
- High permeability shielding for wireless charging
- High saturation powdered iron - not affected by permanent locating magnets
- Durable construction
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

AUTOMOTIVE  
GRADE

**RoHS**  
COMPLIANT

### SHIELD MATERIAL CHARACTERISTICS

- Permeability: approximately 24
- Resistivity: > 10 MΩ at 100 V
- Core loss: 4000 mW/cc at 500 gauss, 250 kHz
- Magnetic saturation: 50 % at 4000 gauss (to 350 O<sub>e</sub>)

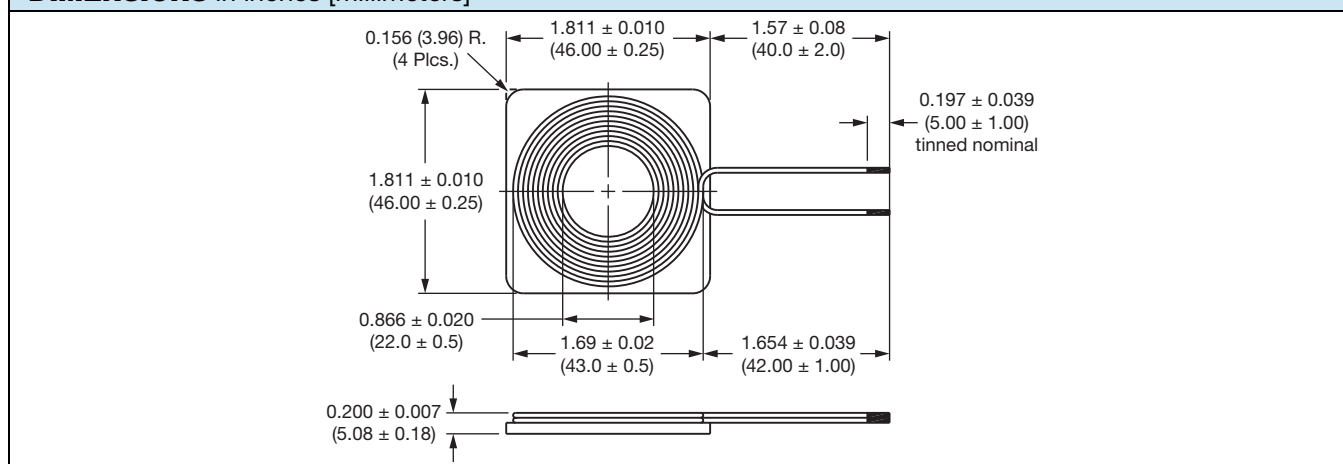
### STANDARD ELECTRICAL SPECIFICATIONS with Test Coil

L <sub>0</sub> INDUCTANCE ± 5 % AT 200 kHz, 0.25 V, 0 A (μH)	DCR ± 10 % AT 25 °C (mΩ)	Q AT 200 kHz (typ.)	SELF RESONANT FREQUENCY (MHz)	HEAT RATING CURRENT DC TYP. (3) (A)	SATURATION CURRENT DC TYP. (4) (A)	EFFICIENCY (6) (%)
24	71	185	7	6	20	> 70

#### Notes

- (1) All test data is referenced to 25 °C ambient.
- (2) Operating Temperature Range -55 °C to +105 °C.
- (3) DC current (A) that will cause an approximate ΔT of 40 °C.
- (4) DC current (A) that will cause L<sub>0</sub> to drop approximately 20 %.
- (5) The part temperature (ambient + temp rise) should not exceed 105 °C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
- (6) When tested using BQ Tesla 500110 Transmitter Chipset, BQ51013 Receiver Chipset and IWAS-4832FF-50 as receiver coil with 2.7 mm spacing. Testing performed per WPC guidelines.

### DIMENSIONS in inches [millimeters]



### DESCRIPTION

IWTX-4646BE-50	5 %	EB	e3
MODEL	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

### GLOBAL PART NUMBER

I	W	T	X	4	6	4	6	B	E	E	B	2	4	0	J	5	0
MODEL				SHIELD SIZE				SHIELD THICKNESS		LEAD (Pb)-FREE	PACKAGE	INDUCTANCE VALUE			TOL.	MATERIAL	LEAD CONFIG.



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