

## High Current, Surface Mount Inductors - Shielded



### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 1.0  $\mu$ H to 390.0  $\mu$ H, tested at 0.1  $V_{RMS}$

**Inductance Tolerance:** 20 %, tighter tolerance available upon request

**Operating Temperature:** -40 °C to +125 °C

**Resistance to Solder Heat:** 260 °C for 10 s

### FEATURES

- High energy storage
- Low resistance
- Magnetically shielded
- Tape and reel packaging for automatic handling
- Material categorization:  
for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### MECHANICAL SPECIFICATIONS

**Core:** ferrite

**Wire:** enamelled copper wire

**Base:** LCP

**Terminals:** nickel bronze

**Adhesive:** epoxy resin

### STANDARD ELECTRICAL SPECIFICATIONS

INDUCTANCE ( $\mu$ H)	TOLERANCE	TEST FREQUENCY L (kHz)	DCR MAX. ( $\Omega$ )	$I_{SAT}$ (A)	$I_{RMS}$ (A)
1.0	$\pm 20$ %	100	0.021	5.6	5.0
1.5	$\pm 20$ %	100	0.022	5.2	4.5
2.2	$\pm 20$ %	100	0.032	5.0	3.8
3.3	$\pm 20$ %	100	0.039	3.9	3.3
4.7	$\pm 20$ %	100	0.054	3.2	2.7
6.8	$\pm 20$ %	100	0.075	2.8	2.2
10	$\pm 20$ %	100	0.101	2.4	2.0
15	$\pm 20$ %	100	0.150	2.0	1.5
22	$\pm 20$ %	100	0.207	1.6	1.3
33	$\pm 20$ %	100	0.334	1.4	1.1
47	$\pm 20$ %	100	0.472	1.0	0.80
56	$\pm 20$ %	100	0.210	0.95	0.90
68	$\pm 20$ %	100	0.340	0.90	0.82
82	$\pm 20$ %	100	0.380	0.85	0.75
100	$\pm 20$ %	100	0.420	0.80	0.68
120	$\pm 20$ %	100	0.460	0.70	0.60
150	$\pm 20$ %	100	0.520	0.60	0.55
180	$\pm 20$ %	100	0.700	0.65	0.50
220	$\pm 20$ %	100	0.800	0.50	0.45
270	$\pm 20$ %	100	1.100	0.45	0.40
330	$\pm 20$ %	100	1.200	0.40	0.35
390	$\pm 20$ %	100	1.400	0.35	0.33

#### Notes

- Inductance drop = 10 % typ. at  $I_{SAT}$
- $\Delta T = 15$  °C typ. at  $I_{RMS}$

### DIMENSIONS in inches [millimeters]

A (Max.)	B (Max.)	D (Max.)	E	F	G	H	I	J
0.510 [12.95]	0.370 [9.40]	0.200 [5.08]	0.100 [2.54]	0.100 [2.54]	0.300 [7.62]	0.115 [2.92]	0.290 [7.37]	0.110 [2.79]

### DESCRIPTION

IDCS-5020	10 $\mu$ H	$\pm 20$ %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

### GLOBAL PART NUMBER

I	D	C	S	5	0	2	0	E	R	1	0	0	M
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE VALUE			INDUCTANCE TOLERANCE



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