

## High Current, Surface-Mount Inductors - Shielded



### ELECTRICAL SPECIFICATIONS

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

**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 ( $\mu\text{H}$ )	INDUCTANCE ( $\mu\text{H}$ )	TOLERANCE	TEST FREQUENCY L (kHz)	DCR MAX. ( $\Omega$ )	$I_{\text{SAT}}$ (A)	$I_{\text{RMS}}$ (A)
IDCS5020ER1R0M	1.0	$\pm 20\%$	100	0.021	5.6	5.0
IDCS5020ER1R5M	1.5	$\pm 20\%$	100	0.022	5.2	4.5
IDCS5020ER2R2M	2.2	$\pm 20\%$	100	0.032	5.0	3.8
IDCS5020ER3R3M	3.3	$\pm 20\%$	100	0.039	3.9	3.3
IDCS5020ER4R7M	4.7	$\pm 20\%$	100	0.054	3.2	2.7
IDCS5020ER6R8M	6.8	$\pm 20\%$	100	0.075	2.8	2.2
IDCS5020ER100M	10	$\pm 20\%$	100	0.101	2.4	2.0
IDCS5020ER150M	15	$\pm 20\%$	100	0.150	2.0	1.5
IDCS5020ER220M	22	$\pm 20\%$	100	0.207	1.6	1.3
IDCS5020ER330M	33	$\pm 20\%$	100	0.334	1.4	1.1
IDCS5020ER470M	47	$\pm 20\%$	100	0.472	1.0	0.80
IDCS5020ER560M	56	$\pm 20\%$	100	0.210	0.95	0.90
IDCS5020ER680M	68	$\pm 20\%$	100	0.340	0.90	0.82
IDCS5020ER820M	82	$\pm 20\%$	100	0.380	0.85	0.75
IDCS5020ER101M	100	$\pm 20\%$	100	0.420	0.80	0.68
IDCS5020ER121M	120	$\pm 20\%$	100	0.460	0.70	0.60
IDCS5020ER151M	150	$\pm 20\%$	100	0.520	0.60	0.55
IDCS5020ER181M	180	$\pm 20\%$	100	0.700	0.65	0.50
IDCS5020ER221M	220	$\pm 20\%$	100	0.800	0.50	0.45
IDCS5020ER271M	270	$\pm 20\%$	100	1.100	0.45	0.40
IDCS5020ER331M	330	$\pm 20\%$	100	1.200	0.40	0.35
IDCS5020ER391M	390	$\pm 20\%$	100	1.400	0.35	0.33

### Notes

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

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	
PRODUCT FAMILY				
	5	0	2	0
	SIZE			
		E	R	
		PACKAGE CODE		
		1	0	0
		INDUCTANCE VALUE		
				M
				INDUCTANCE TOLERANCE



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