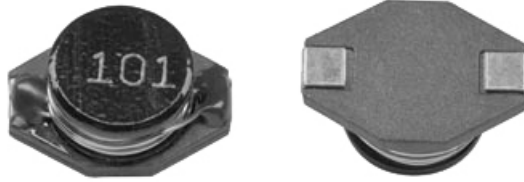




**THE DATASHEET OF  
IDC5020ER1R5M**



## High Current, Surface-Mount Inductors - Non-Shielded



### ELECTRICAL SPECIFICATIONS

**Inductance Range:** 1.0  $\mu\text{H}$  to 1000  $\mu\text{H}$ , 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
- 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						
PART NUMBER	INDUCTANCE ( $\mu\text{H}$ )	TOLERANCE	TEST FREQUENCY L (kHz)	DCR MAX. ( $\Omega$ )	$I_{\text{SAT}}$ (A)	$I_{\text{RMS}}$ (A)
IDC5020ER1R0M	1.0	$\pm 20\%$	100	0.009	9.0	6.8
IDC5020ER1R5M	1.5	$\pm 20\%$	100	0.010	8.0	6.4
IDC5020ER2R2M	2.2	$\pm 20\%$	100	0.012	7.0	6.1
IDC5020ER3R3M	3.3	$\pm 20\%$	100	0.015	6.4	5.4
IDC5020ER4R7M	4.7	$\pm 20\%$	100	0.018	5.4	4.8
IDC5020ER6R8M	6.8	$\pm 20\%$	100	0.027	4.6	4.4
IDC5020ER100M	10	$\pm 20\%$	100	0.038	3.8	3.9
IDC5020ER150M	15	$\pm 20\%$	100	0.046	3.0	3.1
IDC5020ER220M	22	$\pm 20\%$	100	0.085	2.6	2.7
IDC5020ER330M	33	$\pm 20\%$	100	0.10	2.0	2.1
IDC5020ER470M	47	$\pm 20\%$	100	0.14	1.6	1.8
IDC5020ER680M	68	$\pm 20\%$	100	0.20	1.4	1.5
IDC5020ER101M	100	$\pm 20\%$	100	0.28	1.2	1.3
IDC5020ER151M	150	$\pm 20\%$	100	0.40	1.0	1.0
IDC5020ER221M	220	$\pm 20\%$	100	0.61	0.8	0.8
IDC5020ER331M	330	$\pm 20\%$	100	1.02	0.6	0.6
IDC5020ER471M	470	$\pm 20\%$	100	1.27	0.5	0.5
IDC5020ER681M	680	$\pm 20\%$	100	2.02	0.4	0.4
IDC5020ER102M	1000	$\pm 20\%$	100	3.00	0.3	0.3

### Notes

- Inductance drop = 10 % typ. at  $I_{\text{SAT}}$
- $\Delta T = 15\text{ }^\circ\text{C}$  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]	0.205 [5.21]	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				
IDC-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	5	0
			2	0
PRODUCT FAMILY			SIZE	
		E	R	
		PACKAGE CODE		
		1	0	0
		INDUCTANCE VALUE		
				M
				TOL.



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