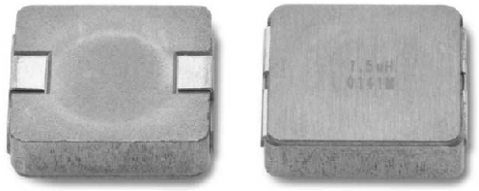
Low Profile, High Current Inductor



Manufactured under one or more of the following:
US Patents; 6,198,375/6,204,744/6,449,829/6,460,244.
Several foreign patents, and other patents pending.

FEATURES

- Lowest height (3.5 mm) in this package footprint
- Shielded construction
- Frequency range up to 5.0 MHz
- Lowest DCR/µH, in this package size
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction
- 100 % lead (Pb)-free and RoHS compliant

Pb-free

RoHS COMPLIANT

APPLICATIONS

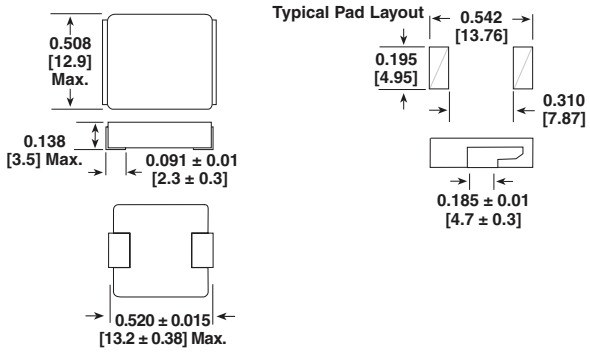
- PDA/Notebook/Desktop/Server applications
- High current POL converters
- Low profile, high current power supplies
- Battery powered devices
- DC/DC converters in distributed power systems
- DC/DC converter for Field Programmable Gate Array (FPGA)

STANDARD ELECTRICAL SPECIFICATIONS

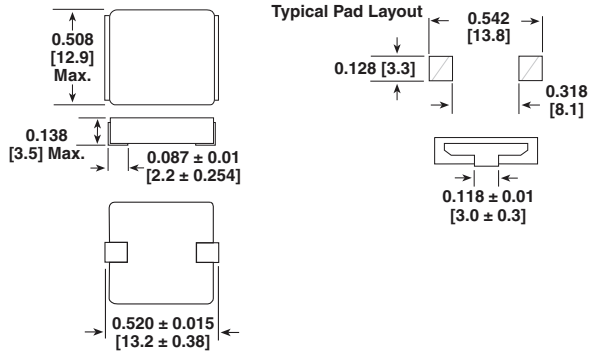
Lo INDUCTANCE µH ± 20 % at 100 kHz, 0.25 V, 0 A	DCR mΩ TYPICAL 25 °C	DCR mΩ MAX 25 °C	HEAT RATING CURRENT DC AMPS[3] TYPICAL	SATURATION CURRENT DC AMPS[4] TYPICAL
0.10	0.8	0.96	43	84
0.15	1	1.2	41	75
0.22	1.1	1.3	38.5	65
0.33	1.3	1.5	36.5	62
0.47	1.6	2	32	55
0.60	1.8	2.2	29	51
0.68	2.3	2.5	28	49
0.82	2.6	3	25	44
1.0	3.3	3.5	24	40
1.5	5.1	5.5	19	35
1.8	6.5	7	16.5	30
2.2	7.2	8	16	29
3.3	11	12	12	27
4.7	14.3	15	10	24
5.6	18.3	19	9.5	19
6.8	19.8	22	9	18
8.2	24.8	28	8.5	16
10	30.4	34	7	14

NOTES:
1. All test data is referenced to 25 °C ambient
2. Operating Temperature Range - 55 °C to + 125 °C
3. DC current (A) that will cause an approximate ΔT of 40 °C
4. DC current (A) that will cause Lo to drop approximately 20 %
5. The part temperature (ambient + temp rise) should not exceed 125 °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.

DIMENSIONS in inches [millimeters]



The diagram above applies to values 0.6 µH and below.



The diagram above applies to values 0.68 µH and above.

DESCRIPTION

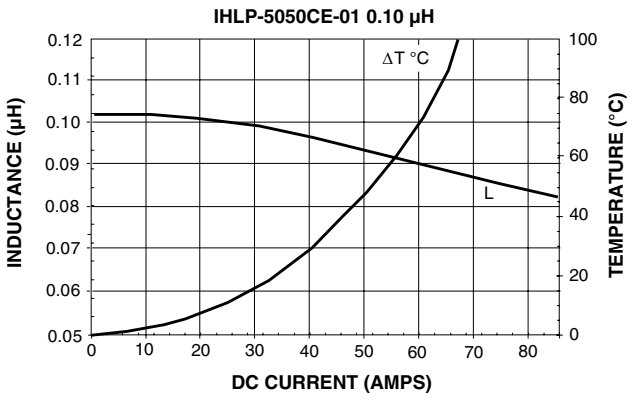
IHLP-5050CE-01	1.0 µH	± 20 %	ER	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC LEAD (Pb)-FREE STANDARD

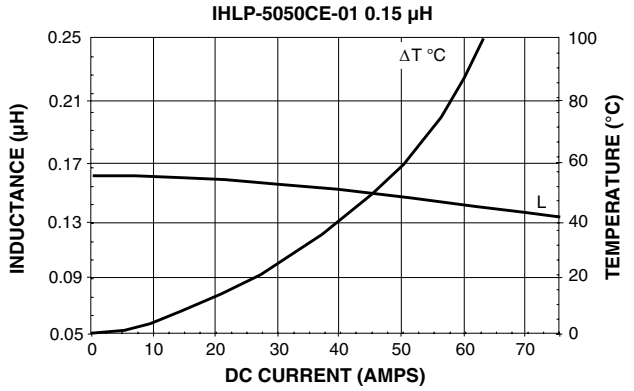
GLOBAL PART NUMBER

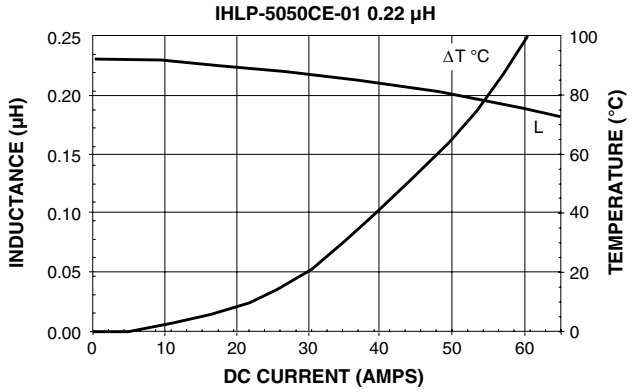
I	H	L	P	5	0	5	0	C	E	E	R	1	R	0	M	0	1
PRODUCT FAMILY				SIZE						PACKAGE CODE		INDUCTANCE VALUE			INDUCTANCE TOLERANCE	SERIES	

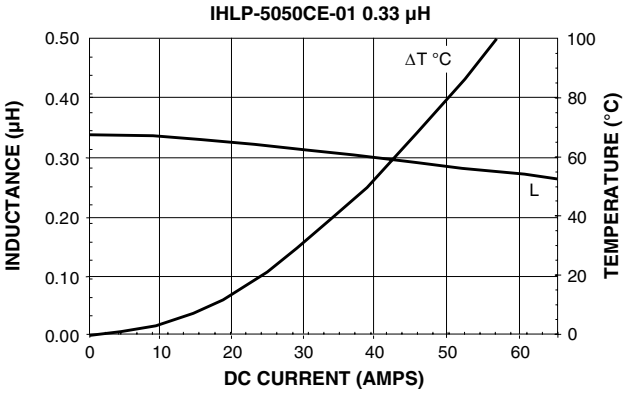
For technical questions, contact: magnetics@vishay.com

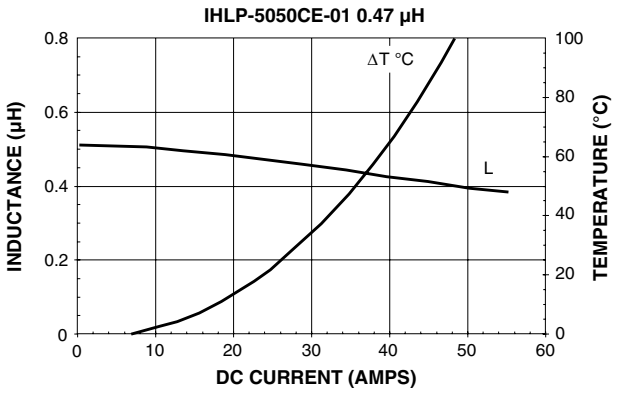
PERFORMANCE GRAPHS

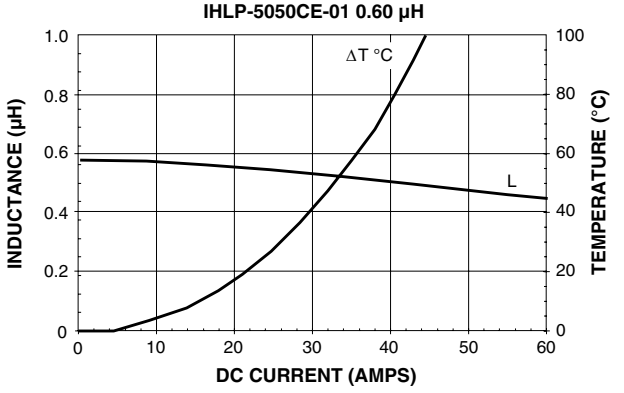






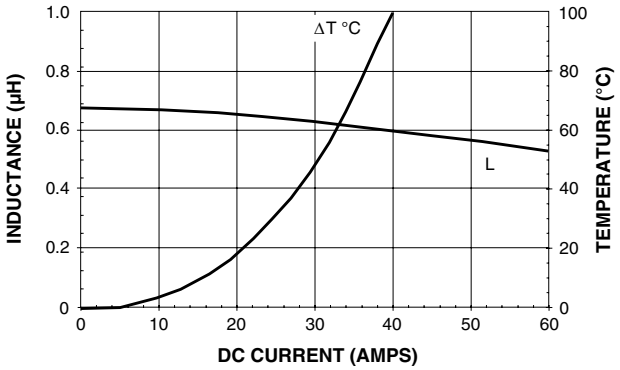




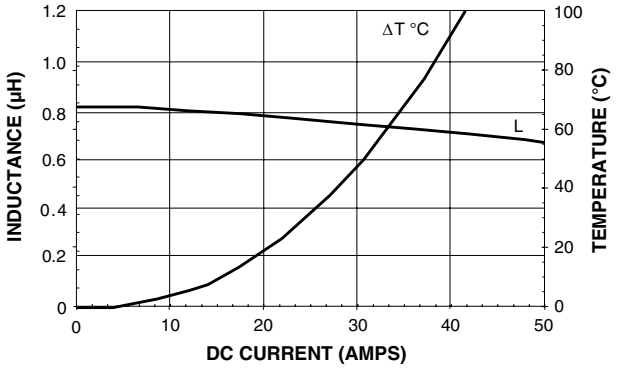


PERFORMANCE GRAPHS

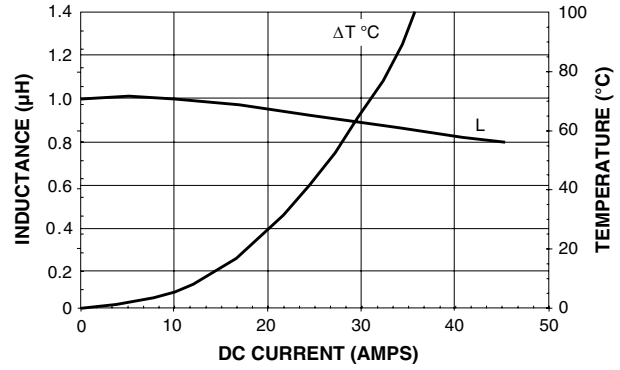
IHLP-5050CE-01 0.68 µH



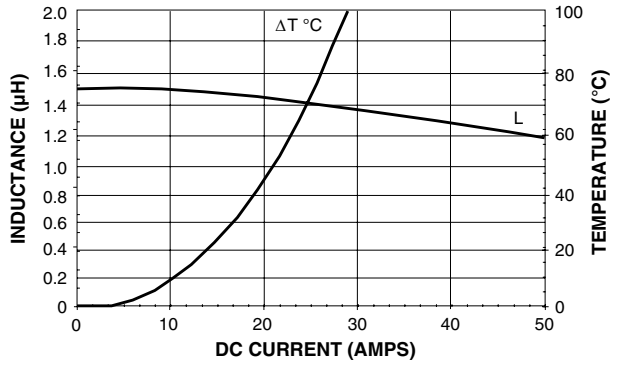
IHLP-5050CE-01 0.82 µH



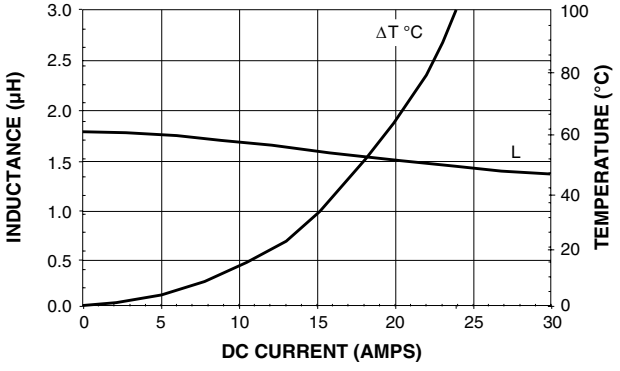
IHLP-5050CE-01 1.0 µH



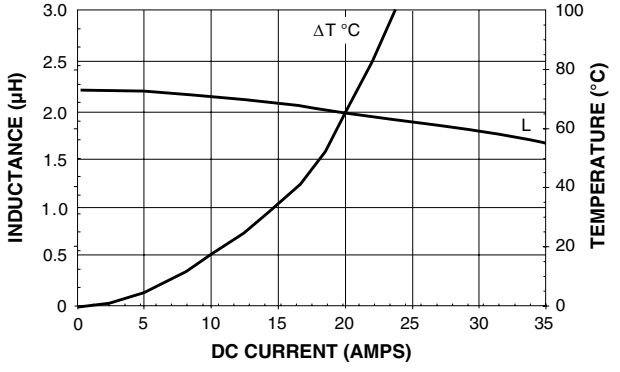
IHLP-5050CE-01 1.5 µH



IHLP-5050CE-01 1.8 µH

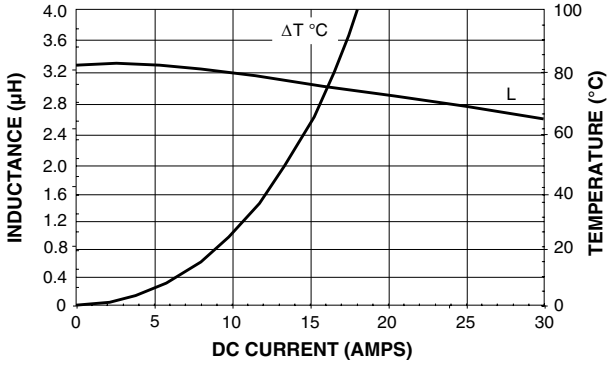


IHLP-5050CE-01 2.2 µH

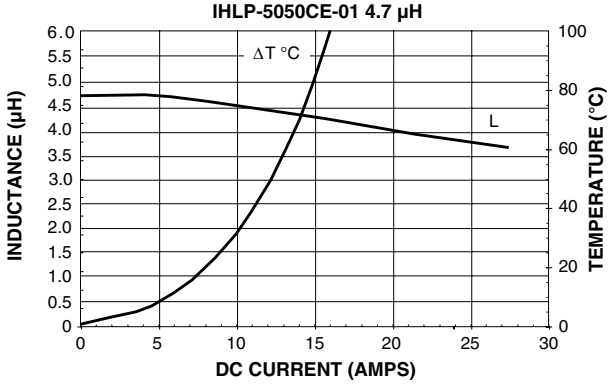


PERFORMANCE GRAPHS

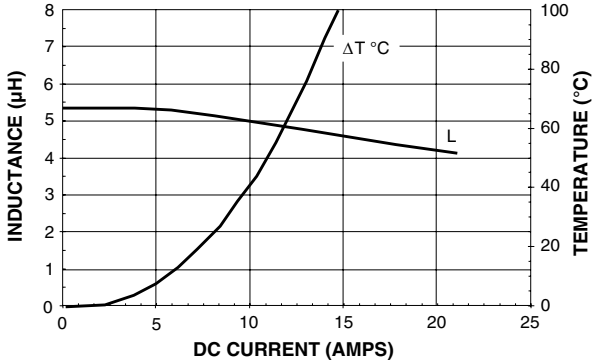
IHLP-5050CE-01 3.3 µH



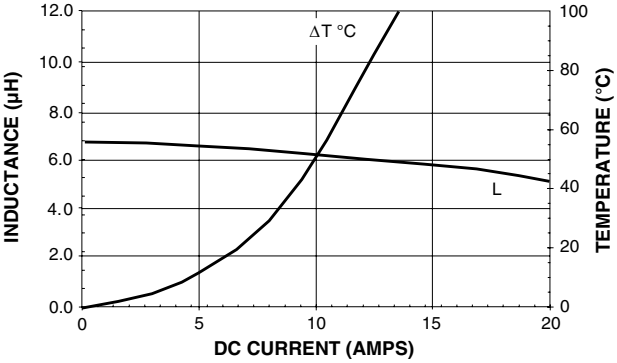
IHLP-5050CE-01 4.7 µH



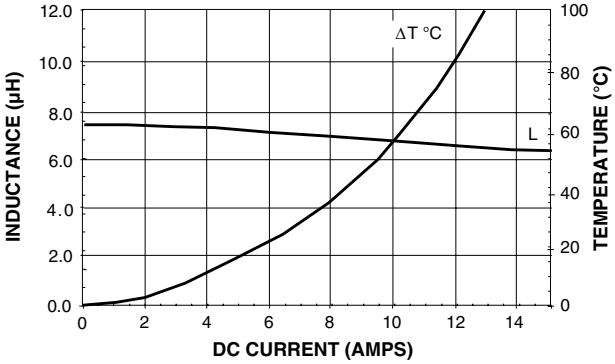
IHLP-5050CE-01 5.6 µH



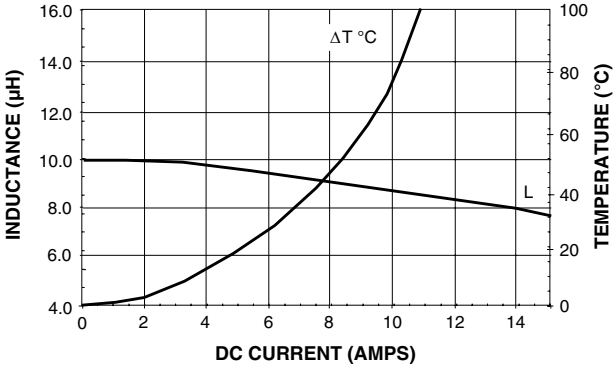
IHLP-5050CE-01 6.8 µH



IHLP-5050CE-01 8.2 µH



IHLP-5050CE-01 10 µH



Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

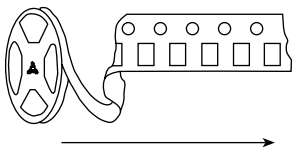
Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.

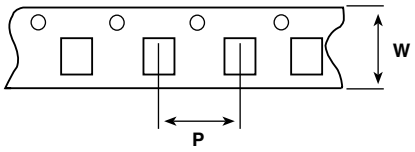
SMD Magnetics Packaging Methods

TAPE AND REEL in inches [millimeters]

Tape and Reel



User Direction of Feed



Carrier Dimensions

MODEL	PACKAGE CODE			REEL SIZE	CARRIER TAPE WIDTH (W)	COMPONENT PITCH (P)	UNITS/ REEL	PACKAGE CODE			UNITS/ BULK
	PREVIOUS CODE	GLOBAL CODE LEAD BEARING	GLOBAL CODE LEAD (Pb)-FREE					PREVIOUS CODE	GLOBAL CODE LEAD BEARING	GLOBAL CODE LEAD (Pb)-FREE	
IHLP-1616AB-01	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	4000	-	-	EB	100
IHLP-1616AB-11	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	4000	-	-	EB	100
IHLP-1616BZ-01	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	4000	-	-	EB	100
IHLP-1616BZ-11	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	4000	-	-	EB	100
IHLP-2525AH	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	2000	-	-	EB	100
IHLP-2525BD	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	2000	-	-	EB	100
IHLP-2525CZ	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	2000	-	-	EB	100
IHLP-2525EZ	-	-	ER	13	0.630 [16.0]	0.472 [12.0]	500	-	-	EB	100
IHLP-4040DZ	-	-	ER	13	0.945 [24.0]	0.630 [16.0]	500	-	-	EB	100
IHLP-5050CE	-	-	ER	13	0.945 [24.0]	0.630 [16.0]	500	-	-	EB	100
IHLP-5050EZ	-	-	ER	13	0.945 [24.0]	0.630 [16.0]	250	-	-	EB	100
IHLP-5050FD	-	-	ER	13	0.945 [24.0]	0.630 [16.0]	250	-	-	EB	100
IHLM-2525CZ	-	-	ER	13	0.630 [16.0]	0.315 [8.0]	2000	-	-	EB	100
IHSM-3825	RC2	RE	ER	13	0.945 [24.0]	0.472 [12.0]	750	P09	PJ	EB	100
IHSM-4825	RC2	RE	ER	13	0.945 [24.0]	0.472 [12.0]	750	P09	PJ	EB	100
IHSM-5832	RC3	RF	ER	13	1.26 [32.0]	0.472 [12.0]	500	P09	PJ	EB	100
IHSM-7832	RC4	RG	ER	13	1.73 [44.0]	0.472 [12.0]	500	P09	PJ	EB	100
IDC-2512	R96	NB	ER	13	0.630 [16.0]	0.315 [8.0]	2000	-	-	-	-
IDC-5020	R96	NB	ER	13	0.630 [16.0]	0.472 [12.0]	500	-	-	-	-
IDC-7328	R96	NB	ER	13	0.945 [24.0]	0.945 [24.0]	250	-	-	-	-
IDCS-2512	R96	NB	ER	13	0.630 [16.0]	0.315 [8.0]	2000	-	-	-	-
IDCS-5020	R96	NB	ER	13	0.630 [16.0]	0.472 [12.0]	500	-	-	-	-
IDCS-7328	R96	NB	ER	13	0.945 [24.0]	0.945 [24.0]	250	-	-	-	-
IDCP-1813	R96	NB	ER	13	0.472 [12.0]	0.315 [8.0]	2000	-	-	-	-
IDCP-2218	R96	NB	ER	13	0.472 [12.0]	0.315 [8.0]	1500	-	-	-	-
IDCP-3114	R96	NB	ER	13	0.630 (16.0)	0.472 [12.0]	1000	-	-	-	-
IDCP-3020	R96	NB	ER	13	0.630 (16.0)	0.472 [12.0]	1000	-	-	-	-
IDCP-3722	R96	NB	ER	13	0.945 [24.0]	0.472 [12.0]	800	-	-	-	-
IDCP-3916	R96	NB	ER	13	0.945 [24.0]	0.472 [12.0]	800	-	-	-	-
IFC-0603	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	5000	-	-	-	-
IFC-0805	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	5000	-	-	-	-
IFCB-0402	-	-	ER	7	0.315 [8.0]	0.079 [2.0]	10 000	-	-	-	-
IFCB-0603	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	5000	-	-	-	-
ILC-0402	-	-	ER	7	0.315 [8.0]	0.079 [2.0]	10 000	-	-	-	-
ILC-0603	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
IMC-0402	-	-	ER	7	0.315 [8.0]	0.079 [2.0]	10 000	-	-	-	-
IMC-0402-01	-	-	ER	7	0.315 [8.0]	0.079 [2.0]	10 000	-	-	-	-
IMC-0603	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	3000	-	-	-	-
IMC-0603-01	-	-	ER	7	0.315 [8.0]	0.079 [2.0]	3000	-	-	-	-
IMC-0805	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	3000	-	-	-	-
IMC-0805-01	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	2000	-	-	-	-

TAPE AND REEL in inches [millimeters]

MODEL	PACKAGE CODE			REEL SIZE	CARRIER TAPE WIDTH (W)	COMPONENT PITCH (P)	UNITS/ REEL	PACKAGE CODE			UNITS/ BULK
	PREVIOUS CODE	GLOBAL CODE LEAD BEARING	GLOBAL CODE LEAD FREE					PREVIOUS CODE	GLOBAL CODE LEAD BEARING	GLOBAL CODE LEAD FREE	
IMC-1008	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	2000	-	-	-	-
IMC-1210	R98/RB3 R99/RB4	SY/AN SZ/R9	ER/ET ES/EU	7 13	0.315 [8.0] 0.315 [8.0]	0.157 [4.0] 0.157 [4.0]	2000 7500	B13	BN	EB	500
IMC-1210-100	R98/RB3 R99/RB4	SY/AN SZ/R9	ER/ET ES/EU	7 13	0.315 [8.0] 0.315 [8.0]	0.157 [4.0] 0.157 [4.0]	2000 7500	B13	BN	EB	500
IMC-1812	R73/R92 R13/R91	RV/RX RQ/RW	ER/ET ES/EU	7 13	0.472 [12.0] 0.472 [12.0]	0.315 [8.0] 0.315 [8.0]	500 2000	B13	BN	EB	500
IMCH-1812	-	-	ER	7	0.472 [12.0]	0.315 [8.0]	500	-	-	-	-
IMC-2220	-	-	ER	13	0.630 [16.0]	0.472 [12.0]	1000	-	-	-	-
ISC-1008	-	-	ER	13	0.472 [12.0]	0.157 [4.0]	750	-	-	-	-
ISC-1210	R98/RB3 R99/RB4	SY/AN SZ/R9	ER/ET ES/EU	7 13	0.315 [8.0] 0.315 [8.0]	0.157 [4.0] 0.157 [4.0]	2000 7500	B13	BN	EB	500
ISC-1812	R73/R92 R13/R91	RV/RX RQ/RW	ER/ET ES/EU	7 13	0.472 [12.0] 0.472 [12.0]	0.315 [8.0] 0.315 [8.0]	500 2000	B13	BN	EB	500
ICM-0805	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	2000	-	-	-	-
ICM-1206	-	-	ER	7	0.315 [8.0]	0.157 [4.0]	2000	-	-	-	-
ILSB-0603	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
ILSB-0805 (0.047 - 2.2 µH)	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
ILSB-0805 (2.7 - 33 µH)	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	3000	-	-	-	-
ILSB-1206	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	3000	-	-	-	-
ILBB-0402	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	10 000	-	-	-	-
ILBB-0603	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
ILBB-0805	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
ILB-1206	RC8 RT4	RK ND	ER ES	7 13	0.315 [8.0] 0.315 [8.0]	0.157 [4.0] 0.157 [4.0]	3000 10 000	-	-	-	-
ILBB-1210	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	2000	-	-	-	-
ILBB-1806	RC8	RK	ER	7	0.472 [12.0]	0.157 [4.0]	2000	-	-	-	-
ILBB-1812	RC8	RK	ER	7	0.472 [12.0]	0.157 [4.0]	1000	-	-	-	-
ILHB-0603	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
ILHB-0805	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
ILHB-1206	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	3000	-	-	-	-
ILHB-1806	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	2000	-	-	-	-
ILHB-1812	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	1000	-	-	-	-
ILAS-1206	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	3000	-	-	-	-
LPE-3325	R94	RY	ER	13	0.945 [24.0]	0.472 [12.0]	1000	S51	SM	EB	10
LPE-4841	R94	RY	ER	13	0.945 [24.0]	0.630 [16.0]	600	S51	SM	EB	10
LPE-5047	R94	RY	ER	13	0.945 [24.0]	0.630 [16.0]	600	S51	SM	EB	10
LPE-6562	R94	RY	ER	13	1.26 [32.0]	0.787 [20.0]	300	S51	SM	EB	10
LPE-6855	R94	RY	ER	13	1.26 [32.0]	0.787 [20.0]	450	S51	SM	EB	10
LPE-3325-CST	-	-	ER	13	0.945 [24.0]	0.472 [12.0]	1000	-	-	EB	10
LPT-3535	RC5	RH	ER	13	0.945 [24.0]	0.630 [16.0]	600	S51	SM	EB	10
LPT-4545	RC5	RH	ER	13	0.945 [24.0]	0.630 [16.0]	600	S51	SM	EB	10