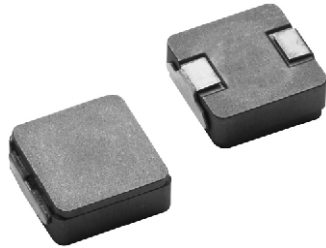


## Low Profile, High Current Inductor



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.

### STANDARD ELECTRICAL SPECIFICATIONS

Lo INDUCTANCE $\mu\text{H} \pm 20\%$ at 100 kHz, 0.25 V, 0 A	DCR $\text{m}\Omega$ TYPICAL 25 °C	DCR $\text{m}\Omega$ MAX 25 °C	HEAT RATING CURRENT DC AMPS <sup>3</sup> TYPICAL	SATURATION CURRENT DC AMPS <sup>4</sup> TYPICAL
0.19	0.70	0.80	40	46
0.24	0.85	0.95	33	44
0.36	1.05	1.15	32	30
0.47	1.53	1.68	30	30
0.56	1.55	1.70	32	22
0.78	1.80	1.90	27	22
1.0	2.30	2.50	25	20
1.8	4.50	5.00	17	16
2.0	5.20	5.80	16	14
4.7	12.90	14.20	9.5	7.6
6.8	17.50	19.30	9.0	7.5
10.0	27.80	30.50	7.5	7.1
15	40.90	45.00	6.25	6.0
22	60.40	66.00	5.0	4.5
47	174.0	191.0	3.3	3.0
100	249.0	270.0	2.5	2.25

#### NOTES:

- All test data is referenced to 25 °C ambient
- Operating Temperature Range - 55 °C to + 125 °C
- DC current (A) that will cause an approximate  $\Delta T$  of 40 °C
- DC current (A) that will cause Lo to drop approximately 20 %
- 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.

### FEATURES

- Shielded construction
- Frequency range up to 1.0 MHz
- Lowest DCR/ $\mu\text{H}$ , 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

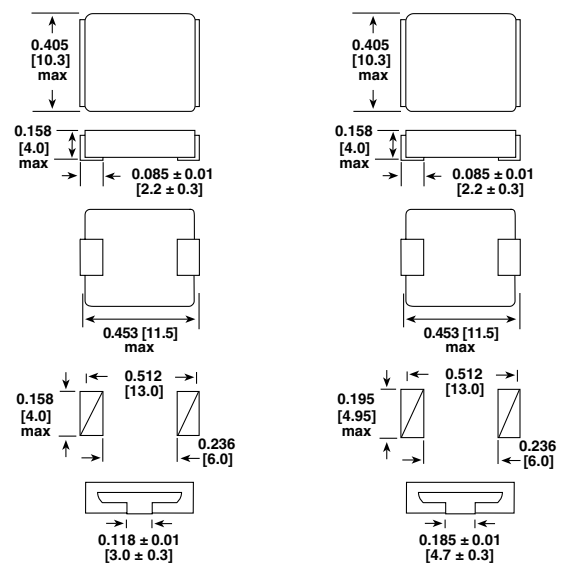

**RoHS**  
 COMPLIANT

### 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)

### DIMENSIONS in inches [millimeters]

#### Typical Pad Layout



The diagram above applies to values  
1.8  $\mu\text{H}$  and above.

The diagram above applies to values  
1.0  $\mu\text{H}$  and below.

### DESCRIPTION

**IHLP-4040DZ-11**  
 MODEL

**2.0  $\mu\text{H}$**   
 INDUCTANCE  
 VALUE

 **$\pm 20\%$**   
 INDUCTANCE  
 TOLERANCE

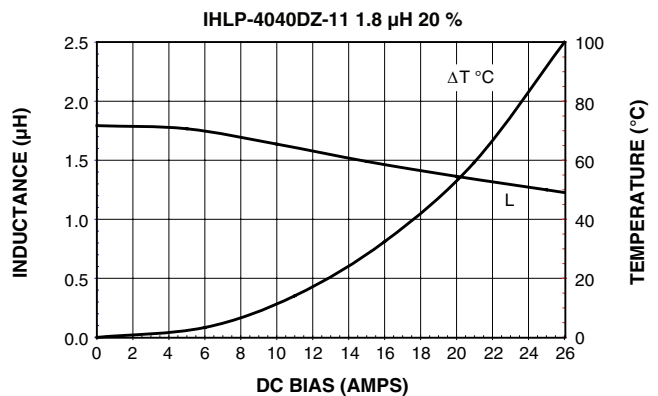
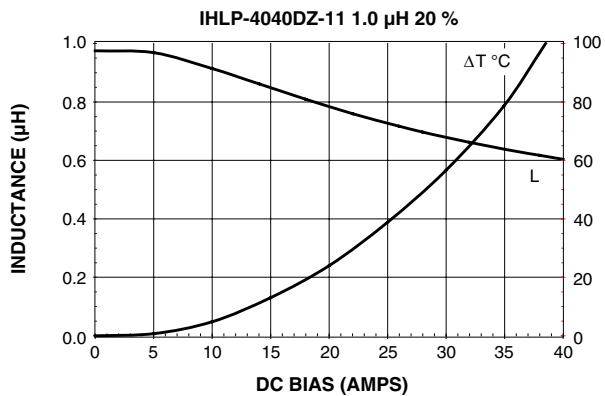
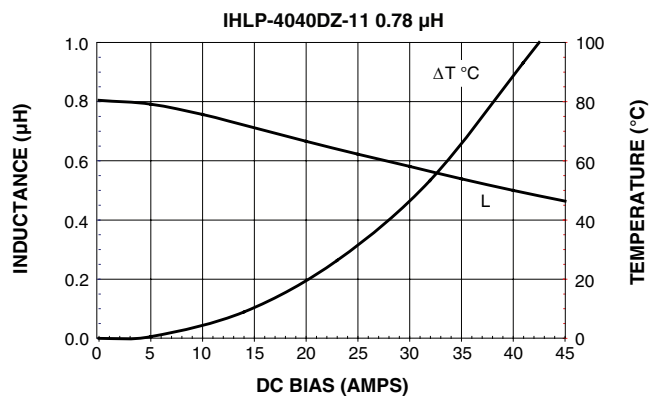
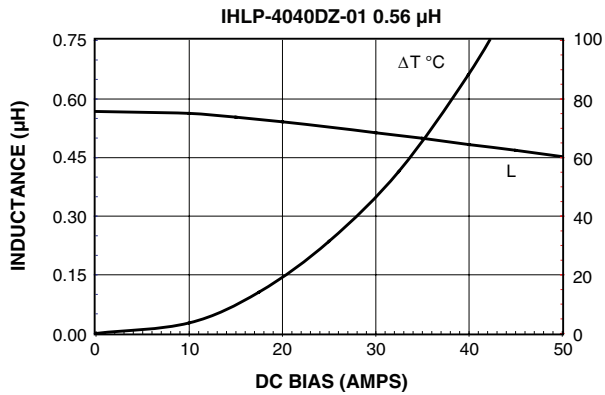
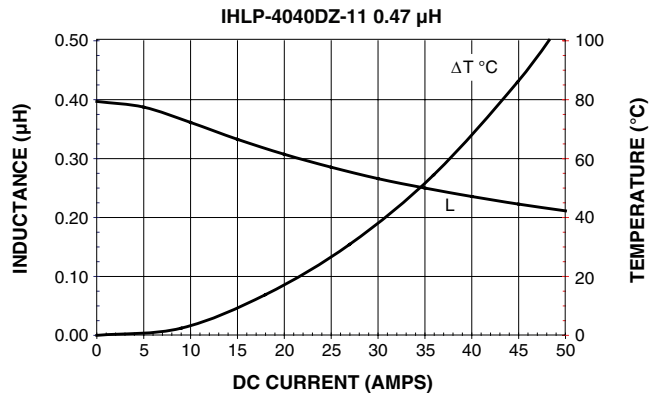
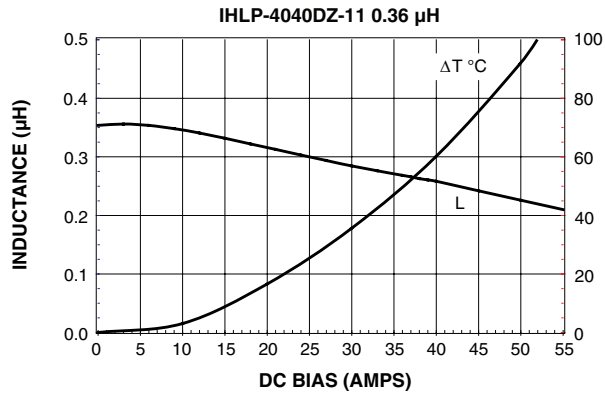
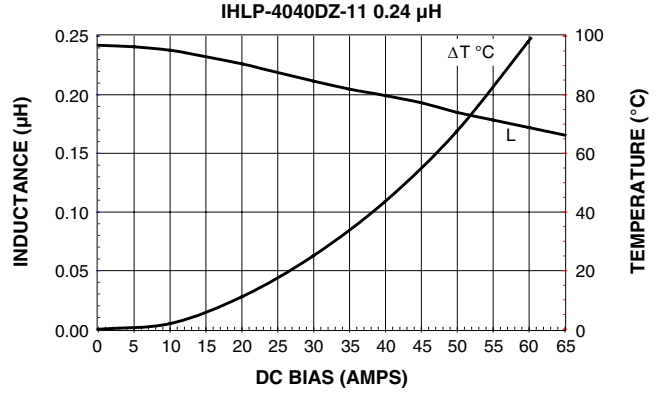
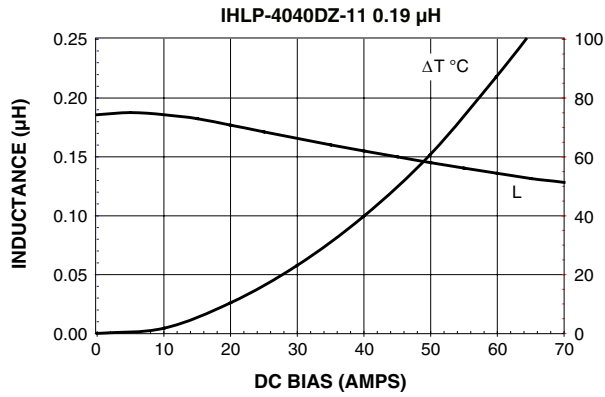
**ER**  
 PACKAGE  
 CODE

**e3**  
 JEDEC LEAD (Pb)-FREE  
 STANDARD

### GLOBAL PART NUMBER

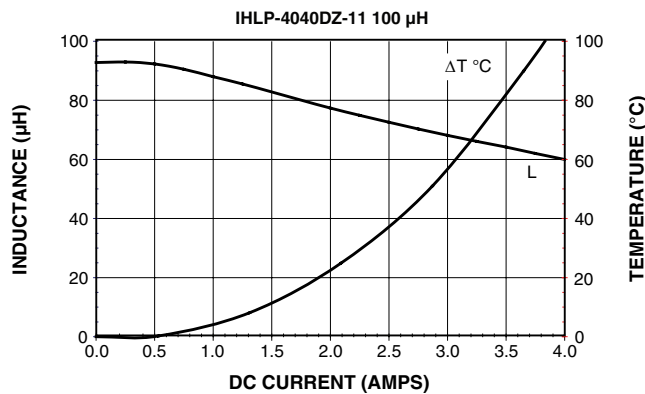
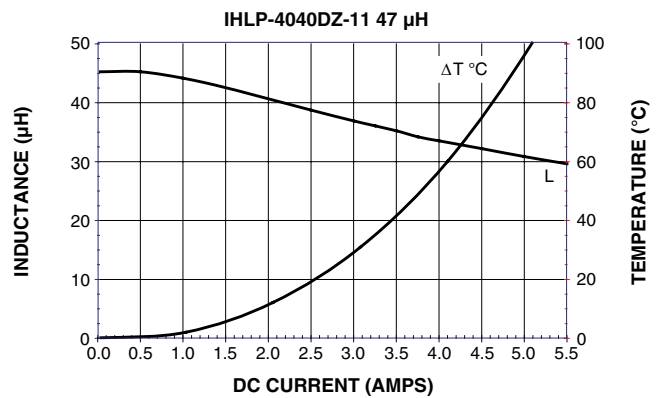
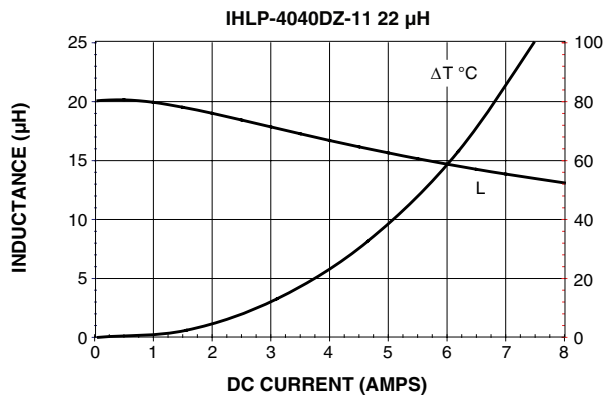
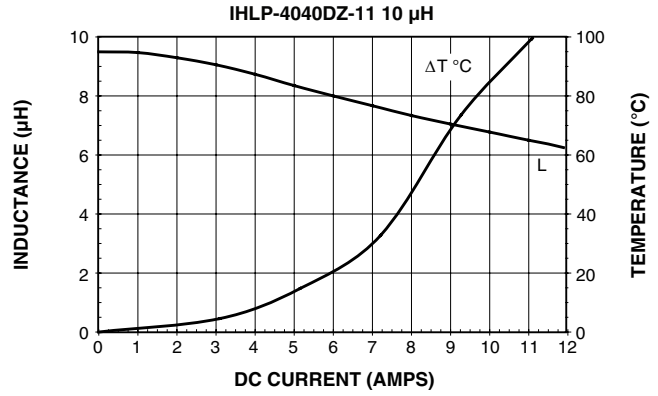
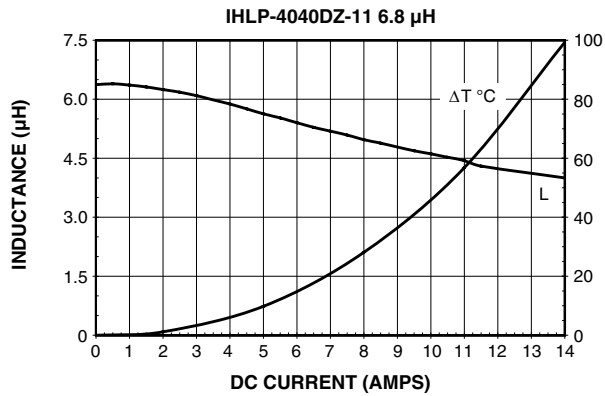
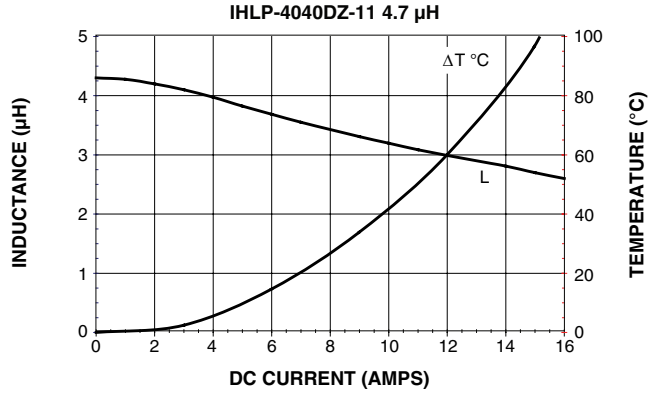
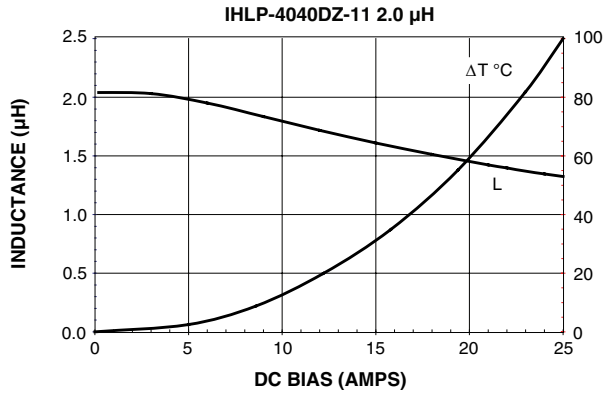
I	H	L	P	4	0	4	0	D	Z	E	R	2	R	0	M	1	1
MODEL				SIZE				PACKAGE CODE		INDUCTANCE VALUE		INDUCTANCE TOLERANCE		SERIES			

## PERFORMANCE GRAPHS





PERFORMANCE GRAPHS





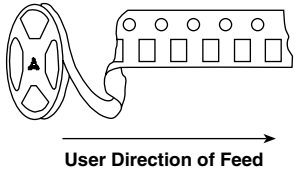
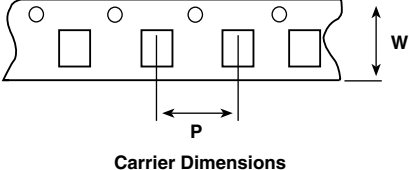
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## SMD Magnetics Packaging Methods

TAPE AND REEL in inches [millimeters]											
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>User Direction of Feed</p> </div> <div style="text-align: center;">  <p>Carrier Dimensions</p> </div> </div>											
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	SY/AN	ER/ET	7	0.315 [8.0]	0.157 [4.0]	2000	B13	BN	EB	500
	R99/RB4	SZ/R9	ES/EU	13	0.315 [8.0]	0.157 [4.0]	7500				
IMC-1210-100	R98/RB3	SY/AN	ER/ET	7	0.315 [8.0]	0.157 [4.0]	2000	B13	BN	EB	500
	R99/RB4	SZ/R9	ES/EU	13	0.315 [8.0]	0.157 [4.0]	7500				
IMC-1812	R73/R92	RV/RX	ER/ET	7	0.472 [12.0]	0.315 [8.0]	500	B13	BN	EB	500
	R13/R91	RQ/RW	ES/EU	13	0.472 [12.0]	0.315 [8.0]	2000				
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	SY/AN	ER/ET	7	0.315 [8.0]	0.157 [4.0]	2000	B13	BN	EB	500
	R99/RB4	SZ/R9	ES/EU	13	0.315 [8.0]	0.157 [4.0]	7500				
ISC-1812	R73/R92	RV/RX	ER/ET	7	0.472 [12.0]	0.315 [8.0]	500	B13	BN	EB	500
	R13/R91	RQ/RW	ES/EU	13	0.472 [12.0]	0.315 [8.0]	2000				
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 $\mu$ H)	RC8	RK	ER	7	0.315 [8.0]	0.157 [4.0]	4000	-	-	-	-
ILSB-0805 (2.7 - 33 $\mu$ H)	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	RK	ER	7	0.315 [8.0]	0.157 [4.0]	3000	-	-	-	-
	RT4	ND	ES	13	0.315 [8.0]	0.157 [4.0]	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