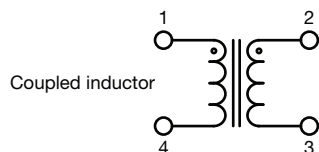


Coupled Ferrite, High Current Power Inductors for TLVR Topologies



FEATURES

- Optimized for trans-inductor voltage regulator (TLVR) topologies
- Enables near-instant power delivery for highly dynamic loads
- Tightens output voltage ripple and decreases size of output capacitors
- Low core loss due to ferrite construction
- Inductance range 70 nH to 220 nH
- 4 package sizes available
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

APPLICATIONS

- 12 V / 1.8 V 16-phase buck voltage regulators
- Datacenters, servers, storage systems
- Graphics processing units (GPU)
- Central processing unit (CPU)
- Application specific integrated circuit (ASIC)

LINKS TO ADDITIONAL RESOURCES



Product Page

STANDARD ELECTRICAL SPECIFICATIONS

PART NUMBER	TEST TERMINAL	L ₀ INDUCTANCE AT 0 A ± 15 % (μH)	DCR ± 10 % (mΩ)	HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾		Q FACTOR AT 100 kHz MIN.
					AT 25 °C	AT 100 °C	
9.6 mm x 6.4 mm x 10.5 mm MAX.							
IHTL3825JEERR10L	1-4	0.100	0.125	75	98	83	21
	2-3		0.33	40			
IHTL3825JEERR12L	1-4	0.120	0.125	75	79	67	25
	2-3		0.33	40			
IHTL3825JEERR15L	1-4	0.150	0.125	75	62	53	27
	2-3		0.33	40			
IHTL3825JEERR18L	1-4	0.180	0.125	75	54	46	37
	2-3		0.33	40			
IHTL3825JEERR22L	1-4	0.220	0.125	75	50	41	46
	2-3		0.33	40			

Notes

- All test data is referenced to 25 °C ambient
- Test condition: 100 kHz, 1 V
- Operating temperature range -40 °C to +125 °C
- Storage condition: -40 °C to +125 °C (on board); less than 40 °C and < 60 % RH (in component packaging)
- ⁽¹⁾ DC current (A) that will cause an approximate ΔT of 40 °C
- ⁽²⁾ DC current (A) that will cause L₀ to drop approximately 20 % at 25 °C, 100 °C, and 125 °C ambient

**STANDARD ELECTRICAL SPECIFICATIONS**

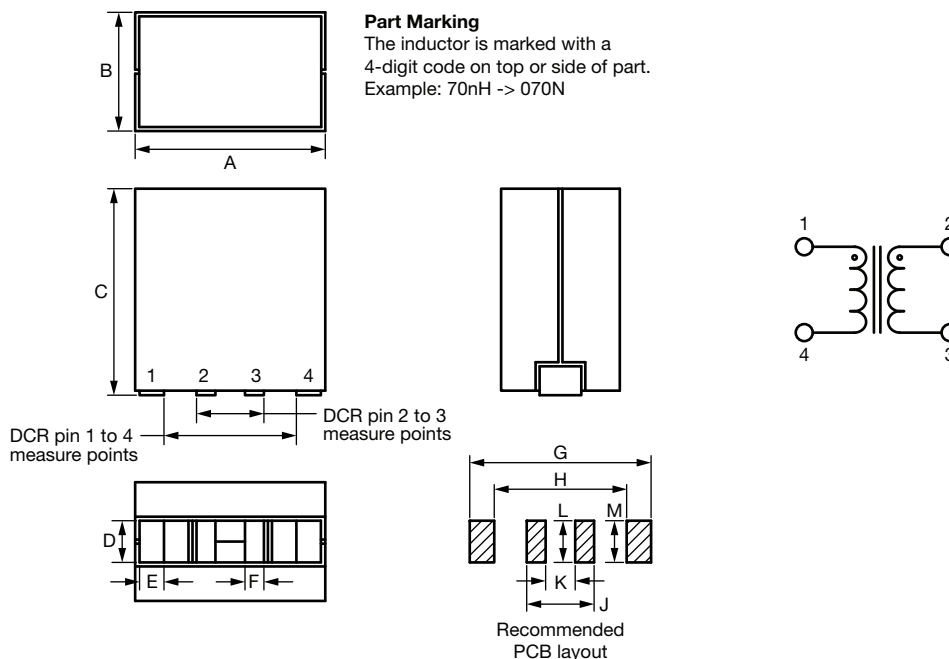
PART NUMBER	TEST TERMINAL	L ₀ INDUCTANCE AT 0 A ± 15 % (μH)	DCR ± 10 % (mΩ)	HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾		Q FACTOR AT 100 kHz MIN.
					AT 25 °C	AT 100 °C	
10.0 mm x 5.0 mm x 12.0 mm MAX.							
IHTL4020LZER70NL	1-4	0.070	0.125	75	127	110	15
	2-3		0.45	35			
IHTL4020LZER80NL	1-4	0.080	0.125	75	111	96	17
	2-3		0.45	35			
IHTL4020LZER90NL	1-4	0.090	0.125	75	98	85	19
	2-3		0.45	35			
12.0 mm x 6.0 mm x 8.0 mm MAX.							
IHTL5025HZER80NL	1-4	0.080	0.10	78	105	95	-
	2-3		0.30	45			
IHTL5025HZERR10L	1-4	0.100	0.10	78	85	75	-
	2-3		0.30	45			
IHTL5025HZERR12L	1-4	0.120	0.10	78	70	63	-
	2-3		0.30	45			
12.0 mm x 6.0 mm x 11.2 mm MAX.							
IHTL5025KBER80NL	1-4	0.080	0.125	77	150	128	19
	2-3		0.37	45			
IHTL5025KBERR11L	1-4	0.105	0.125	77	125	106	22
	2-3		0.37	45			
IHTL5025KBERR12L	1-4	0.120	0.125	77	102	87	23
	2-3		0.37	45			
IHTL5025KBERR15L	1-4	0.150	0.125	77	84	71	26
	2-3		0.37	45			
IHTL5025KBERR17L	1-4	0.170	0.125	77	70	60	28
	2-3		0.37	45			
IHTL5025KBERR20L	1-4	0.200	0.125	77	58	50	38
	2-3		0.37	45			

Notes

- All test data is referenced to 25 °C ambient
- Test condition: 100 kHz, 1 V
- Operating temperature range -40 °C to +125 °C
- Storage condition: -40 °C to +125 °C (on board); less than 40 °C and < 60 % RH (in component packaging)

⁽¹⁾ DC current (A) that will cause an approximate ΔT of 40 °C

⁽²⁾ DC current (A) that will cause L₀ to drop approximately 20 % at 25 °C, 100 °C, and 125 °C ambient

DIMENSIONS in inches [millimeters]


MODEL	A	B	C	D	E	F	G	H	J	K	L	M
IHTL3825JE	0.366 ± 0.012 [9.3 ± 0.3]	0.240 ± 0.012 [6.1 ± 0.3]	0.402 ± 0.012 [10.2 ± 0.3]	0.126 ± 0.012 [3.2 ± 0.3]	0.045 ± 0.012 [1.15 ± 0.3]	0.024 ± 0.012 [0.6 ± 0.3]	0.374 [9.5]	0.244 [6.2]	0.130 [3.3]	0.020 [0.5]	0.146 [3.7]	0.146 [3.7]
IHTL4020LZ	0.382 ± 0.012 [9.7 ± 0.3]	0.185 ± 0.012 [4.7 ± 0.3]	0.461 ± 0.012 [11.7 ± 0.3]	0.091 ± 0.012 [2.3 ± 0.3]	0.043 ± 0.012 [1.1 ± 0.3]	0.034 ± 0.012 [0.86 ± 0.3]	0.417 [10.6]	0.280 [7.1]	0.157 [4.0]	0.031 [0.8]	0.118 [3.0]	0.197 [5.0]
IHTL5025HZ	0.472 max. [12.0 max.]	0.236 max. [6.0 max.]	0.315 max. [8.0 max.]	0.106 ± 0.012 [2.7 ± 0.3]	0.098 ± 0.012 [2.5 ± 0.3]	0.043 ± 0.012 [1.1 ± 0.3]	0.492 [12.5]	0.256 [6.5]	0.169 [4.3]	0.051 [1.3]	0.118 [3.0]	0.134 [3.4]
IHTL5025KB	0.461 ± 0.012 [11.7 ± 0.3]	0.224 ± 0.012 [5.7 ± 0.3]	0.433 ± 0.008 [11.0 ± 0.2]	0.096 ± 0.012 [2.45 ± 0.3]	0.045 ± 0.012 [1.15 ± 0.3]	0.051 ± 0.012 [1.3 ± 0.3]	0.469 [11.9]	0.327 [8.3]	0.169 [4.3]	0.039 [1.0]	0.116 [2.95]	0.116 [2.95]

Note

- Coplanarity of four terminals: 0.004" = 0.1 mm max.

DESCRIPTION

MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD
IHTL5025KB	0.2 µH	± 15 %	ER	e3

GLOBAL PART NUMBER

I H T L
PRODUCT FAMILY

5 0 2 5 K B
SIZE

E R
PACKAGE CODE
ER = tape and reel

R 2 0
INDUCTANCE VALUE
R20 = 0.2 µH

L
INDUCTANCE TOLERANCE
L = ± 15 %



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