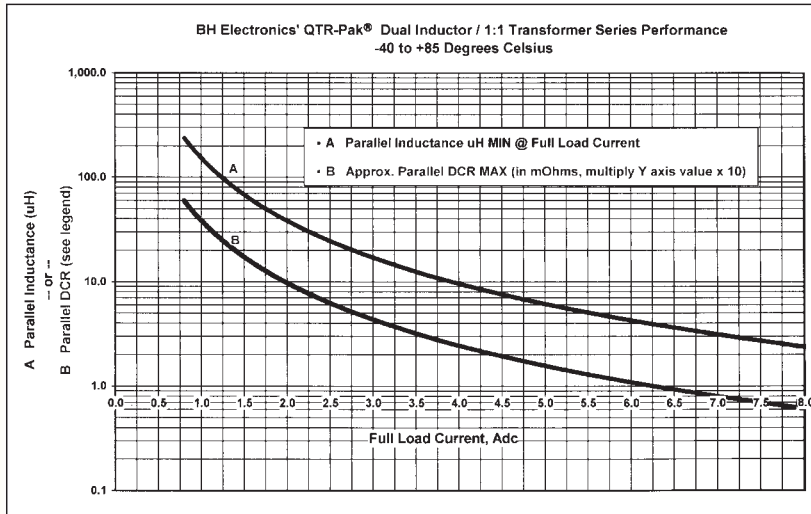
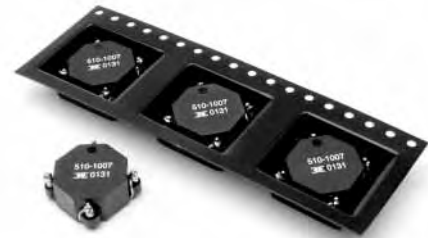


Surface Mount Dual Inductors/Transformers

QTR-Pak® SMT Dual Inductors/1:1 Transformers

- Low EMI - toroid-based designs
- Space efficient - highest performance in smallest space, height / area
 - Combination of highest inductance @ current and/or lowest resistance
- Superior SMT precision - 0.004-inch coplanarity, cartridge-brass pin/foot platform
- Tested for thermal shock, static humidity, random vibration, mechanical shock (18 x 8700Gs), solder heat resistance, leaching, bend strength and board adhesion
- Used in Linear Technology, TI/Unitrode, National Semiconductor, MAXIM and IXYS circuits



HOW TO USE PLOTS - POWER APPLICATIONS FROM 400 KHZ TO 2 MHZ:

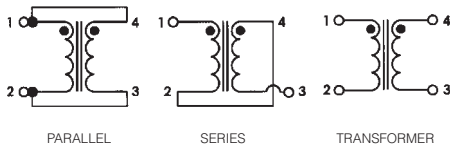
- Determine peak current your inductor or transformer will see in operation.
- Determine inductance requirement (Note BH's MIN L @ MAX I).
- Determine if your MIN inductance @ MAX current falls on or below the curve (A).
 - (If value is above curve, a larger part is likely needed: Contact BH.)
 - (Curve B is included to illustrate the relationship between I, L & DCR.)
- Pick a part number from table below - then contact BH.

BH ELECTRONICS' QTR-PAK® DUAL INDUCTOR / 1:1 TRANSFORMER "STANDARD SERIES"								
PARALLEL					SERIES			
BH PART NUMBER	LOC (uH) @ 0 Adc Tolerance ± 20%	MIN. LOC Biased (uH)*	MAX. Current (Adc)	Nominal DCR (Ω)**	LOC (uH) @ 0 Adc Tolerance ± 20%	MIN. LOC Biased (uH)*	MAX. Current (Adc)	Nominal DCR (Ω)**
510-1048	272	218	0.84	0.578	1,088	872	0.42	2.32
510-1043	185	148	1.02	0.375	740	591	0.51	1.50
510-1037	127	102	1.23	0.311	508	406	0.62	1.25
510-1032	86.9	69.5	1.48	0.202	348	278	0.74	0.810
510-1028	60.3	48.3	1.78	0.136	241	193	0.89	0.545
510-1025	43.6	34.9	2.09	0.092	174	139	1.05	0.367
510-1022	29.6	23.7	2.54	0.059	118	94.6	1.27	0.237
510-1019	18.3	14.6	3.24	0.037	73.2	58.4	1.62	0.150
510-1017	13.6	10.9	3.75	0.025	54.4	43.6	1.88	0.102
501-0726	8.48	7.72	4.45	0.016	33.9	27.2	2.38	0.064
510-1010	5.43	4.34	5.94	0.010	21.7	17.4	2.97	0.040
510-1009	4.56	3.65	6.47	0.0093	18.2	14.6	3.24	0.037
510-1007	3.05	2.44	7.91	0.006	12.2	9.8	3.96	0.024
510-1006	2.41	1.93	8.9	0.0043	9.6	7.7	4.45	0.0172
510-1005	1.85	1.48	10.17	0.0037	7.4	5.9	5.09	0.0148
510-1004	1.36	1.09	11.87	0.0026	5.4	4.4	5.94	0.0104

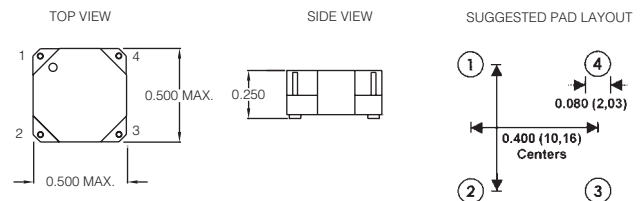
*MINIMUM Inductance Values (at Full Load Current) for Operating Temperature Range -40° to 85° C.

** Parallel DCR equals resistance value per winding divided by 2. Series DCR equals resistance value per winding times 2.

SCHEMATICS



MECHANICALS



Surface Mount Dual Inductors/Transformers

QTR-Pak[®] and 8th-Pak[™]

Rugged, Efficient & Versatile Designs – For Other Applications

- Non 1:1 Power Transformers
- Isolation Transformers
- Gate Drive Transformers
- Current Sense Transformers
- Military Versions

Non 1:1 Power Transformers:

Designs based on Inductance @ Current plots

EXAMPLE: QTR-Pak[®] Part Number 501-0657 (1:1.8 Transformer)

- As recommended by Linear Technology's LTC1626-SYNC, high efficiency, 2-phase synchronous step down switching regulator. 7uH MIN @ 4 Adc on primary. High voltage test: 500 VDC @ 1 sec.
- This is but one example of many Non 1:1 transformers available in either QTR-Pak[®] or 8th-Pak[™] surface mount packages.

Isolation Transformers:

Up to 4000 VAC isolation with QTR-Pak[®]; 2000 VAC isolation with 8th-Pak[™]

EXAMPLE: QTR-Pak[®] Part Number 510-1219 (1:1 QTR-Pak[®] Isolation Transformer, 2000 VAC)

- Rated at 14.6 uH MIN @ 3.24 Adc. This 2000V isolation version of the 510-1019 QTR-Pak[®] (see catalog page 6) is consistent with the Inductance @ Current plots. QTR-Pak[®] Isolation Transformers can meet your requirements with isolation of 2000 or 4000V.

EXAMPLE: BH 8th-Pak[™] Part Number 511-1218 (1:1 8th-Pak[™] Isolation Transformer, 2000 VAC)

- For use with Isolated Flyback Switching Regulator like Linear Technology's LT1425 and is rated at 24.0 uH MIN @ 1.11 Adc.

Small Gate Drive Transformers: 2000 VAC / 1 sec

EXAMPLE: 8th-Pak[™] Part Number 511-0002 (3:1 8th-Pak Gate Drive Transformer with 2000 VAC isolation)

- Used with IXYS' IXBD4411/IXBD4411 ISOSMART chipset for 1- or 3-phase motor controls and other IXYS applications. OCL MIN, 53uH. Primary leakage inductance 0.45uH MAX. Interwinding capacitance: 4pF MAX.

Current Sense Transformers:

QTR-Pak[®] / 8th-Pak[™] 1:50; 1:100; 1:200

EXAMPLE: BH part numbers 500-2600 to 500-2605 (Current Sense Transformers)

- See page 16 for more information.

Military Versions: QTR-Pak[®] / 8th-Pak[™]

- Any of the QTR-Pak[®] and 8th Pak[™] transformers can be made available in MIL-PRF-27 versions (Grade 5, Class Q thru S) depending on the application.
- Military Versions of the QTR-Pak[®] and 8th Pak[™] product have been successfully tested for the following MIL-PRF-27 qualification inspections: solderability, resistance to solvents, resistance to soldering heat, terminal strength, temperature rise, vibration, shock, thermal shock, immersion, moisture resistance, overload, flammability, life testing. Electrical testing is performed throughout the testing process.

Tape & Reel Packaging: EIA RS481-A; ASTM Approved

- QTR-Pak[®] @ 400/13-inch reel, 1,200 MIN releases
- 8th-Pak[™] @ 1,000/13-inch reel
- Contact BH with your requirements