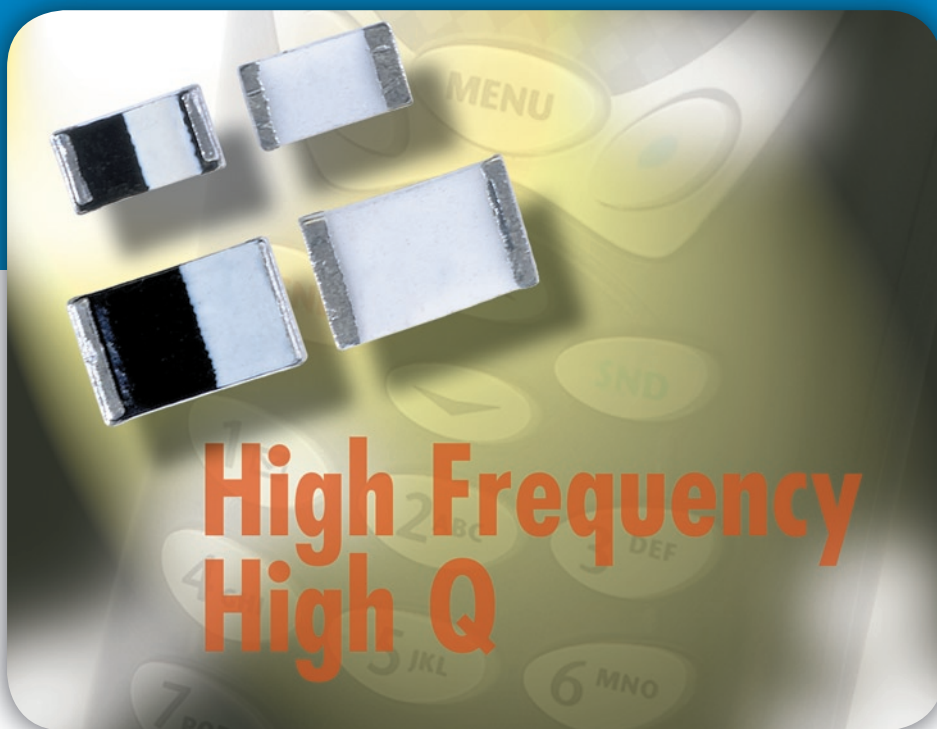




INDUCTORS –

Model IFC-0603 and IFC-0805



New High-Frequency Chip Inductor Using Photolithographic Process: $Q > 80$ at 1700 MHz; 15 GHz SRF; 2% Tolerance Available

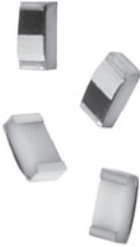
**Vishay Dale Photo-Etched Ceramic Inductor for Critical
Impedance-Matching Circuits**

FEATURES

- **Inductance Values:** 0603 1.5 nH to 18 nH; 0805 1.5 nH to 47 nH
- **High Self-Resonant Frequency:** >15 GHz for lower values
- **High Efficiency:** Q_s are typically 50 @ 1700 MHz and 37 @ 800 MHz for 0603; and 65 @ 1700 MHz and 48 @ 800 MHz for 0805
- **New Proprietary Photolithographic Construction:** Improves stability and precision of manufacturing and reduces overall cost compared to standard thin film construction
- **Tight Tolerances:** As low as 2%



High Q/SRF, Low Value Chip Inductors



FEATURES

- High reliability.
- Surface mountable.
- High self-resonant frequency.
- 2% tolerance available.
- Temperature range: - 40°C to + 125°C (no load)
- - 40°C to + 85°C (full rated current).

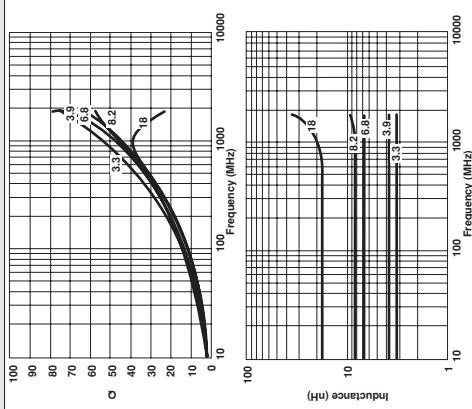
STANDARD ELECTRICAL SPECIFICATIONS									
MODEL	100 MHz (nH)	L (nH)	TOL.	Q 100 MHz (Typ.)	Q 800 MHz (Typ.)	Q 1700 MHz (Typ.)	SRF MHz (Typ.)	DCR Ohms (Max.)	RATED DC CURRENT (mA)
IFC-0603	1.5	0.3nH	5%	11	38	42	> 15000	0.06	1000
	2.2	0.3nH	5%	10	35	40	> 15000	0.08	1000
	2.7	0.3nH	5%	10	40	47	> 15000	0.10	1000
	3.3	0.3nH	5%	10	38	51	13000	0.12	1000
	3.9	0.3nH	5%	10	41	53	10000	0.15	1000
	4.7	0.3nH	5%	10	36	51	8000	0.20	500
	5.6	0.3nH	5%	10	38	55	7000	0.21	500
	6.8	0.3nH	5%	10	38	48	5100	0.29	500
	8.2	0.3nH	5%	10	38	47	4900	0.32	500
	10	0.3nH	5%	10	34	40	3700	0.35	500
	12	0.3nH	5%	10	34	40	3600	0.42	500
	18	0.3nH	5%	10	32	44	3200	0.50	400
IFC-0805	1.5	0.3nH	5%	17	57	125	> 15000	0.04	1000
	2.2	0.3nH	5%	16	45	98	> 15000	0.05	1000
	2.7	0.3nH	5%	16	46	71	> 15000	0.09	1000
IFC-0805	3.3	0.3nH	5%	15	55	67	11000	0.13	1000
	3.9	0.3nH	5%	15	53	80	9000	0.13	1000
	4.7	0.3nH	5%	15	53	78	7000	0.16	500
	5.6	0.3nH	5%	15	53	80	4500	0.19	500
	6.8	0.3nH	5%	14	50	77	4500	0.25	500
	8.2	0.3nH	5%	13	48	67	3600	0.27	500
	10	0.3nH	5%	14	48	68	3500	0.36	500
	12	0.3nH	5%	15	48	59	3100	0.41	500
	15	0.3nH	5%	14	48	48	2550	0.49	400
	18	0.3nH	5%	16	41	39	1600	0.59	300
	22	0.3nH	5%	16	39*	32*	1300	0.90	300
	33	0.3nH	5%	17	30*	—	1060	1.1	300
IFC-0805	47	0.3nH	5%	17	30*	—	1060	1.2	300

L, Q, SRF measured on HP-4291A and HP-8753D

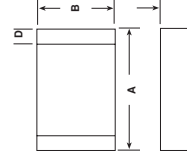
*500 MHz.

PERFORMANCE GRAPHS:

INDUCTANCE AND Q VS FREQUENCY



DIMENSIONS in inches [millimeters]



MODEL	A	B	C	D
IFC-0603	0.063 ± 0.004 [1.60 ± 0.1]	0.031 ± 0.004 [0.80 ± 0.1]	0.020 ± 0.004 [0.50 ± 0.1]	0.015 Max. [0.38 Max.]

DESCRIPTION

IFC-0603 MODEL	10nH INDUCTANCE VALUE	± 10% INDUCTANCE TOLERANCE
-------------------	-----------------------------	----------------------------------

SAP PART NUMBERING GUIDELINES (INTERNAL)

I	F	C	N	C	1	0	0	3	K
PRODUCT FAMILY			PACKAGE CODE			SIZE			TOL.

FEATURES

- High reliability.
- Surface mountable.
- High self-resonant frequency.
- 2% tolerance available.
- Temperature range: - 40°C to + 125°C (no load)
- - 40°C to + 85°C (full rated current).

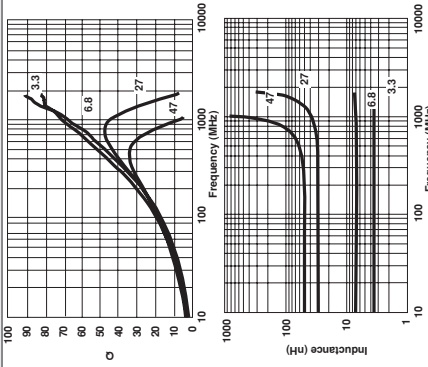
STANDARD ELECTRICAL SPECIFICATIONS									
MODEL	100 MHz (nH)	L (nH)	TOL.	Q 100 MHz (Typ.)	Q 800 MHz (Typ.)	Q 1700 MHz (Typ.)	SRF MHz (Typ.)	DCR Ohms (Max.)	RATED DC CURRENT (mA)
IFC-0805	1.5	0.3nH	5%	17	57	125	> 15000	0.04	1000
	2.2	0.3nH	5%	16	45	98	> 15000	0.05	1000
	2.7	0.3nH	5%	16	46	71	> 15000	0.09	1000
	3.3	0.3nH	5%	15	55	67	11000	0.13	1000
	3.9	0.3nH	5%	15	53	80	9000	0.13	1000
	4.7	0.3nH	5%	15	53	78	7000	0.16	500
	5.6	0.3nH	5%	14	50	77	4500	0.19	500
	6.8	0.3nH	5%	14	48	67	3600	0.25	500
	8.2	0.3nH	5%	13	48	68	3500	0.36	500
	10	0.3nH	5%	14	48	59	3100	0.41	500
	12	0.3nH	5%	15	48	48	2550	0.49	400
	15	0.3nH	5%	16	41	39	1600	0.59	300
IFC-0805	18	0.3nH	5%	16	39*	32*	1300	0.90	300
	33	0.3nH	5%	17	30*	—	1060	1.1	300
	47	0.3nH	5%	17	30*	—	1060	1.2	300

L, Q, SRF measured on HP-4291A and HP-8753D

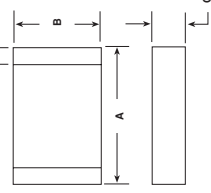
*500 MHz.

PERFORMANCE GRAPHS:

INDUCTANCE AND Q VS FREQUENCY



DIMENSIONS in inches [millimeters]



MODEL	A	B	C	D
IFC-0805	0.079 ± 0.006 [2.00 ± 0.15]	0.049 ± 0.006 [1.25 ± 0.15]	0.020 ± 0.006 [0.50 ± 0.15]	0.015 Max. [0.38 Max.]

DESCRIPTION

IFC-0805 MODEL	10nH INDUCTANCE VALUE	± 10% INDUCTANCE TOLERANCE
-------------------	-----------------------------	----------------------------------

SAP PART NUMBERING GUIDELINES (INTERNAL)

I	F	C	N	C	1	0	0	5	K
PRODUCT FAMILY			PACKAGE CODE			SIZE			TOL.