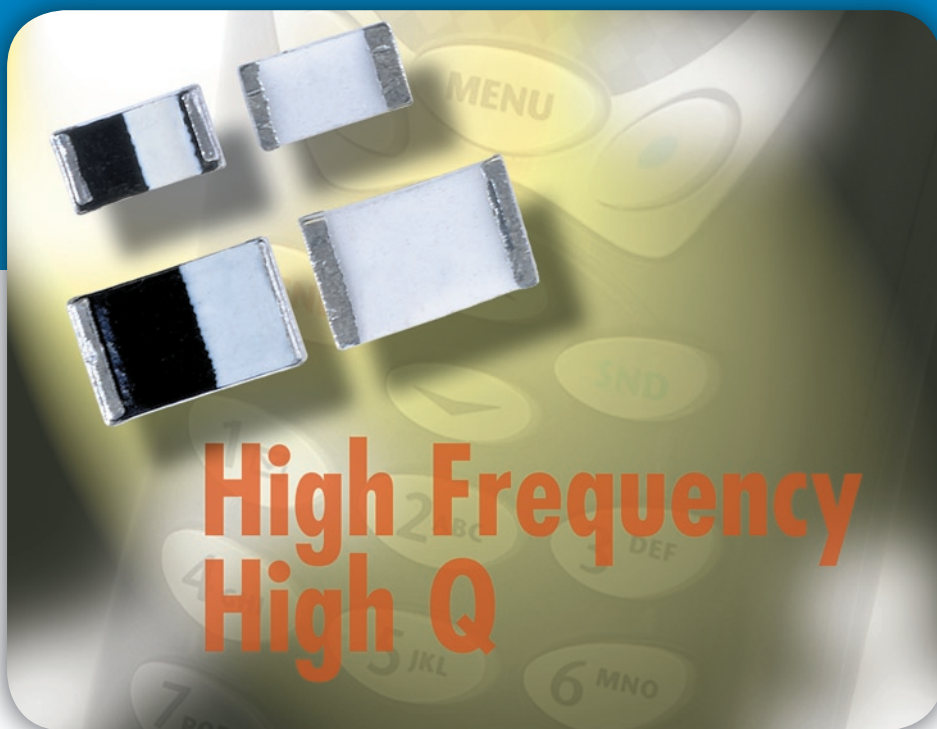




# INDUCTORS –

## 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%



# IFC-0603 and IFC-0805

Vishay Dale

## High Q/SRF, Low Value Chip Inductors

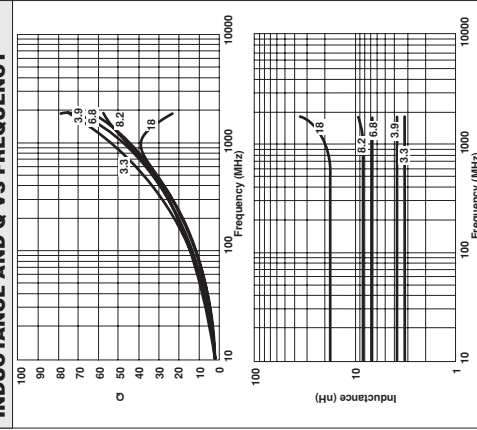


### FEATURES

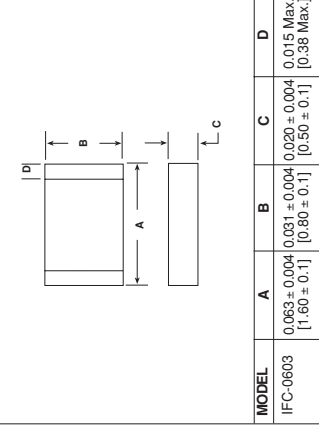
- High reliability.
- Surface mountable.
- High self-resonant frequency.
- 2% tolerance available.
- Temperature range: -40°C to +125°C (no load)
- -40°C to +85°C (full rated current).

STANDARD ELECTRICAL SPECIFICATIONS									
MODEL	L 100 MHz (nH)	L 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	0.3% 0.3% 0.3% 0.3% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5%	11	38	42	> 15000 > 15000 > 14000 13000 10000 8000 7000 5100 4900 3700 3600 3200 2800 2500	0.06 0.08 0.08 0.12 0.20 0.21 0.29 0.32 0.42 0.50 0.50 0.50 0.50 0.50 0.50 0.75	1000 1000 1000 1000 500 500 500 500 500 500 500 400 400	
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

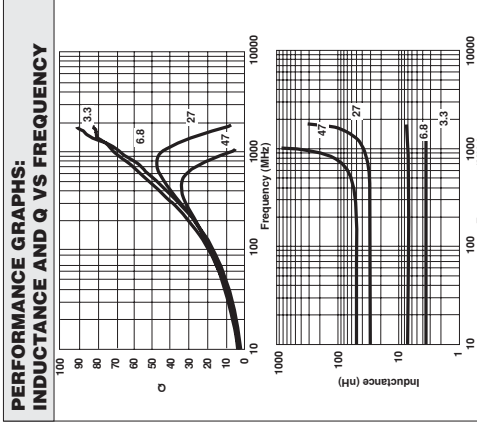
SAP PART NUMBERING GUIDELINES (INTERNAL)												
I	F	C	0	6	0	0	3	1	0	N	C	K
PRODUCT FAMILY			SIZE				INDUCTANCE VALUE			PACKAGE CODE		

### FEATURES

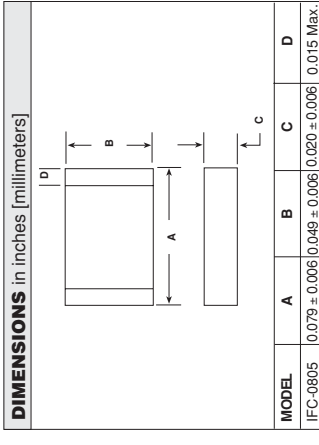
- High reliability.
- Surface mountable.
- High self-resonant frequency.
- 2% tolerance available.
- Temperature range: -40°C to +125°C (no load)
- -40°C to +85°C (full rated current).

STANDARD ELECTRICAL SPECIFICATIONS									
MODEL	L 100 MHz (nH)	L 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	0.3% 0.3% 0.3% 0.3% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 5%	13	57	63	> 15000 > 15000 > 12000 11000 9000 7000 4500 3600 3500 3100 2550 1600 1300 1200 1060	0.04 0.06 0.09 0.11 0.13 0.16 0.25 0.27 0.36 0.41 0.49 0.69 0.90 0.90 1.1 1.2	1000 1000 1000 1000 500 500 500 500 500 500 400 400 400 300 300 300	
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 [1.23 ± 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	0	8	0	0	5	1	0	N	C	K
PRODUCT FAMILY			SIZE				INDUCTANCE VALUE			PACKAGE CODE		

Revision 28-Aug-02

For technical questions, contact [Magnetics@vishay.com](mailto:Magnetics@vishay.com)

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