

# Chip Inductors – 0402HL (1005)



- Higher inductance values than other 0402 ceramic chip inductors
- 12 inductance values from 270 nH to 820 nH

Part number <sup>1</sup>	Inductance <sup>2</sup> ±5% (nH)	Q typ <sup>3</sup>	SRF typ <sup>4</sup> (MHz)	DCR max <sup>5</sup> (Ohms)	Irms <sup>6</sup> (mA)
0402HL-271XJR_	270	11 @ 25 MHz	590	1.95	190
0402HL-301XJR_	300	11 @ 25 MHz	600	2.15	190
0402HL-331XJR_	330	11 @ 25 MHz	513	2.23	170
0402HL-361XJR_	360	11 @ 25 MHz	485	2.36	170
0402HL-391XJR_	390	11 @ 25 MHz	260	2.35	170
0402HL-471XJR_	470	11 @ 25 MHz	220	2.67	160
0402HL-511XJR_	510	12 @ 25 MHz	450	3.50	150
0402HL-561XJR_	560	12 @ 25 MHz	420	3.70	140
0402HL-601XJR_	600	12 @ 25 MHz	440	3.78	130
0402HL-681XJR_	680	13 @ 25 MHz	380	5.15	120
0402HL-741XJR_	740	12 @ 25 MHz	165	5.45	110
0402HL-821XJR_	820	13 @ 25 MHz	385	5.85	90

1. When ordering, please specify **termination** and **packaging** codes:

### 0402HL-821XJRW

**Termination:** **R** = RoHS compliant matte tin over nickel over silver-platinum-glass frit.  
Special order: **Q** = RoHS tin-silver-copper (95.5/4/0.5) or **P** = non-RoHS tin-lead (63/37).

**Packaging:** **W** = 7" machine-ready reel. EIA-481 punched paper tape (2000 parts per full reel). Quantities less than full reel available: in tape (not machine ready) or with leader and trailer (\$25 charge).

**U** = Less than full reel. In an effort to simplify our part numbering system, Coilcraft is eliminating the need for multiple packaging codes. When ordering, simply change the last letter of your part number from U to W.

- Inductance measured at 25 MHz using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.
- Q measured using a Coilcraft SMD-F fixture in Agilent/HP 4287A impedance analyzer or equivalent.
- SRF measured using Agilent/HP 8753D network analyzer and Coilcraft SMD-D test fixture.

5. DCR measured on Cambridge Technology micro-ohmmeter and a Coilcraft CCF1010 test fixture.

6. Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

7. Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Designer's Kit C453** contains 20 of each value

**Core material** Ceramic

**Environmental** RoHS compliant without exemption, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.

**Weight** 0.7 – 1.3 mg

**Ambient temperature** –40°C to +125°C with Irms current,

**Storage temperature** Component: –40°C to +140°C.  
Tape and reel packaging: –40°C to +80°C

**Maximum part temperature** +140°C (ambient + temp rise).

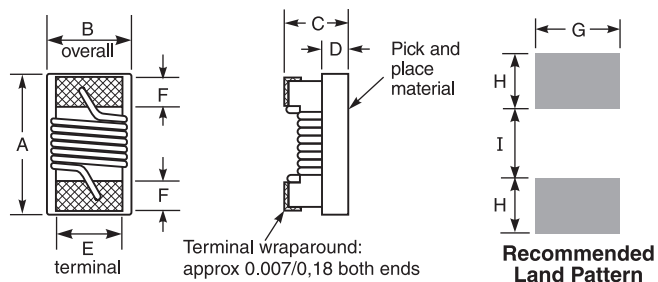
**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Temperature Coefficient of Inductance (TCL)** +25 to +150 ppm/°C

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Packaging** 2000 per 7" reel. Paper tape: 8 mm wide, 0.66 mm thick, 2 mm pocket spacing

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).



Amax	Bmax	Cmax	D	E	F	G	H	I
0.048	0.031	0.022	0.010	0.018	0.008	0.026	0.014	0.025
1,22	0,79	0,56	0,25	0,46	0,20	0,66	0,36	0,64

**Note:** Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.



# Chip Inductors – 0402HL Series

## L vs Frequency



## Typical Q vs Frequency



## Typical Impedance vs Frequency

