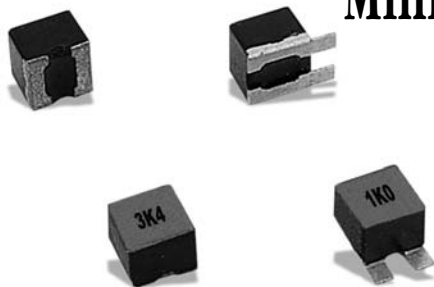


Miniature Fixed Chip Inductors - H01 Series



- With or without tab terminations
- Terminations with tin-lead coating
- Q factor ≥ 30 at 1 MHz
- SRF ≥ 8 MHz
- $\Delta L/L \pm 1000$ ppm/°C
- Materials meet UL94-V0 rating
- Weight: 0.12 gram

Electrical Data (25°C)

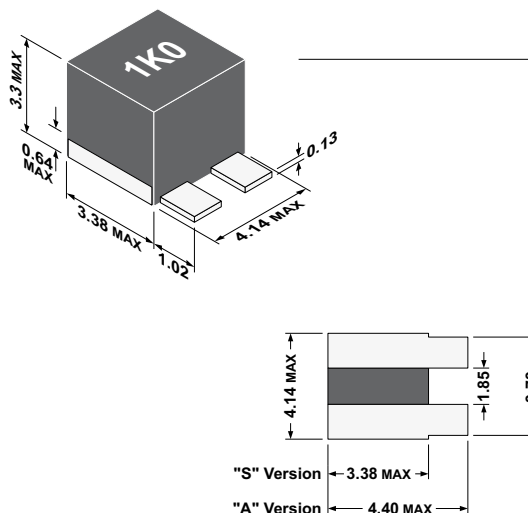
ID Code	Inductance $\mu H \pm 15\%$	IDC* Amps	DCR $m\Omega \pm 15\%$
MPCI H01 K38 1xy	0.38	1.5	29
MPCI H01 K67 1xy	0.67	1.25	39
MPCI H01 1K0 1xy	1.0	1.0	54
MPCI H01 1K5 1xy	1.5	0.85	73
MPCI H01 2K0 1xy	2.0	0.70	100
MPCI H01 2K7 1xy	2.7	0.62	120
MPCI H01 3K4 1xy	3.4	0.55	150
MPCI H01 4K6 1xy	4.6	0.49	190
MPCI H01 5K6 1xy	5.6	0.44	230
MPCI H01 7K1 1xy	7.1	0.41	270
MPCI H01 10K 1xy	10.0	0.34	390
MPCI H01 12K 1xy	12.0	0.29	530
MPCI H01 27K 1xy	27.0	0.20	1040
MPCI H01 M10 1xy	100.0	0.10	3800

* Max permanent DC current at +125°C.

Ambient temperature: -40°C/+100°C

Storage temperature: -55°C/+125°C

Typical Dimensions (mm)



To Order

MPCI H01 ### 1xy

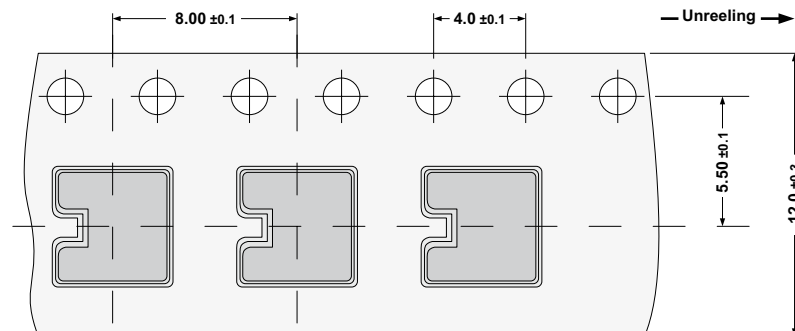
MPCI H01	###	1	x	y
Range	Inductance value	Version	Terminations x = G for Gold x = T for Tinned	y = S without tab y = A with tab

Application

Output filtering in low power DC / DC conversion

Packaging

Tape and Reel (without tab):
500 pieces ; or Tray : 49 pieces



Miniature Chip Inductors MSCIH01

QPL Components



MPCIH01 series are usually installed on Military applications and breadboards for Space applications.

Since January 2003, Microspire has been manufacturing Radio Frequency Fixed Coils, MPCIH01 series fulfilling ESA ESCC Generic specification N° 3201 and detail specification N° 3201/008.

This range is named MSCI (S for space applications).

This qualification approval includes final production tests Chart II, burn-in and electrical measurements to testing level B Chart III and qualification testing Chart IV.

For procurement, different quality levels are offered :

- Final production tests Chart II
- Burn-in and electrical measurements Chart III with level B or C (as required)
- Lot acceptance testing Chart V if required

Components delivered through this specification need to be processed and inspected in accordance with the Microspire Process Identification Document (P.I.D.).

Each component delivered is traceable to its production lot.

Microspire Non-QPL ID Code	Microspire QPL ID Code	ESA SCC Component Part Number
MPCI H01 K38 1TS 15	MSCI H01 K38 1TS 15	3201008 05 b L38 L
MPCI H01 K67 1TS 15	MSCI H01 K67 1TS 15	3201008 05 b L67 L
MPCI H01 1K0 1TS 15	MSCI H01 1K0 1TS 15	3201008 05 b 1L0 L
MPCI H01 1K5 1TS 15	MSCI H01 1K5 1TS 15	3201008 05 b 1L5 L
MPCI H01 2K0 1TS 15	MSCI H01 2K0 1TS 15	3201008 05 b 2L0 L
MPCI H01 2K7 1TS 15	MSCI H01 2K7 1TS 15	3201008 05 b 2L7 L
MPCI H01 3K4 1TS 15	MSCI H01 3K4 1TS 15	3201008 05 b 3L4 L
MPCI H01 4K6 1TS 15	MSCI H01 4K6 1TS 15	3201008 05 b 4L6 L
MPCI H01 5K6 1TS 15	MSCI H01 5K6 1TS 15	3201008 05 b 5L6 L
MPCI H01 7K1 1TS 15	MSCI H01 7K1 1TS 15	3201008 05 b 7L1 L
MPCI H01 10K 1TS 15	MSCI H01 10K 1TS 15	3201008 05 b 100 L
MPCI H01 12K 1TS 15	MSCI H01 12K 1TS 15	3201008 05 b 120 L
MPCI H01 27K 1TS 15	MSCI H01 27K 1TS 15	3201008 05 b 270 L
MPCI H01 M10 1TS 15	MSCI H01 M10 1TS 15	3201008 05 b 101 L
05	b	L (tolerance)
05 for SnPb Termination	b = B for Chart III level B b = C for Chart III level C	L for ±15%



Miniature Fixed Chip Inductors - 233 H01 Series



- With or without tab terminations
- Terminations with tin-lead coating
- Q factor ≥ 30 at 1 MHz
- SRF ≥ 8 MHz
- $\Delta L/L \pm 1000$ ppm/°C
- Materials meet UL94-V0 rating
- Weight: 0.12 gram

Electrical Data (25°C)

ID Code	Inductance $\mu\text{H} \pm 15\%$	IDC* Amps	DCR $\text{m}\Omega \pm 15\%$
MPCI 233 K38 H01 1x	0.38	1.5	16.0
MPCI 233 K67 H01 1x	0.67	1.25	25.0
MPCI 233 1K0 H01 1x	1.0	1.0	38.0
MPCI 233 1K5 H01 1x	1.5	0.85	54.0
MPCI 233 2K0 H01 1x	2.0	0.70	79.0
MPCI 233 2K7 H01 1x	2.7	0.62	100
MPCI 233 3K4 H01 1x	3.4	0.55	129
MPCI 233 4K6 H01 1x	4.6	0.49	160
MPCI 233 5K6 H01 1x	5.6	0.44	200
MPCI 233 7K1 H01 1x	7.1	0.41	228
MPCI 233 10K H01 1x	10.0	0.34	335
MPCI 233 12K H01 1x	12.0	0.29	460
MPCI 233 27K H01 1x	27.0	0.20	900
MPCI 233 M10 H01 1x	100.0	0.10	3300

* Max permanent DC current at +125 °C.

Ambient temperature: -55°C/+175 °C

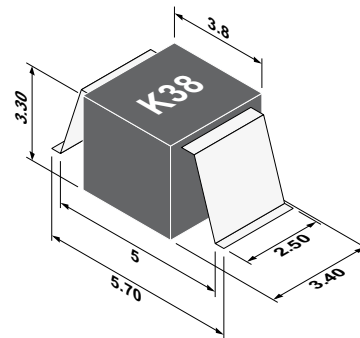
Storage temperature: -55°C/+125 °C

To Order

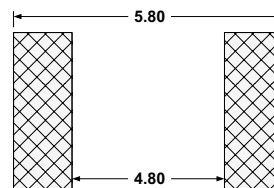
MPCI 233 H01 ### 1x

MPCI 233 H01	###	1	x
Range	Inductance value	Version	Terminations x = G for Gold x = T or S for Tinned

Typical Dimensions (mm)



PCB Layout (suggested)



Application

Output filtering in low power DC / DC conversion

Packaging

Tray



SMD Power Inductors - ESI01



- Energy storage, smoothing, filtering
- Applied standards: ECSS-Q-ST-70-02C, MIL-STD-202, DO-160 and ESCC 3201 generic specification for space products
- Materials meet UL94-V0 rating
- Suited for IR and vapor reflow soldering
- Frequency range up to 1 MHz
- Operating temperature range: -55 °C to +125 °C
- Weight: <2 grams

Electrical Data (25°C)

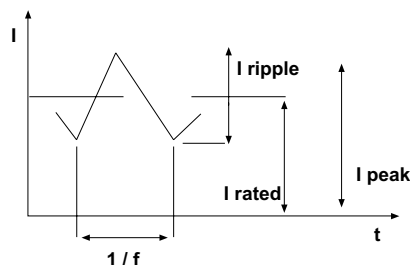
ID Code	Inductance (μH)	permanent (ADC)	DCR at 25°C (mΩ)	Tol.
ESI 01 2K7 1x	2.68	2.1	24	10
ESI 01 4K2 1x	4.20	1.7	35	
ESI 01 7K1 1x	7.10	1.2	65	
ESI 01 12K 1x	12	1.1	86	
ESI 01 17K 1x	16.8	0.93	124	
ESI 01 22K 1x	22	0.76	184	
ESI 01 31K 1x	31	0.63	270	
ESI 01 48K 1x	48	0.49	440	
ESI 01 64K 1x	64	0.41	630	
ESI 01 81K 1x	81	0.39	710	
ESI 01 M10 1x	100	0.33	1000	
ESI 01 M15 1x	151	0.26	1550	

To Order

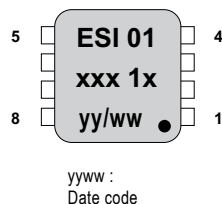
ESI01	###	1	x
SMD Energy Storage Inductor	Value code 2K7 = 2,7 μH M10 = 100 μH	Version	x = J J leaded x = W W Terminals

Notes

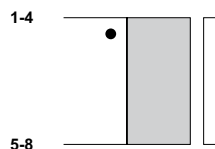
1. Inductance at 20 mV, 10 kHz with WK3260B impedance analyser
2. Typical inductance value at recommended full load
3. I_{peak} max = maximum peak value of current at +125 °C; L value not guaranteed
4. 10 % admissible I ripple over I rated at f=200 kHz
5. Isolation voltage 150 Vdc
- 1 min - R_i > 100 MΩ between winding and magnetic core



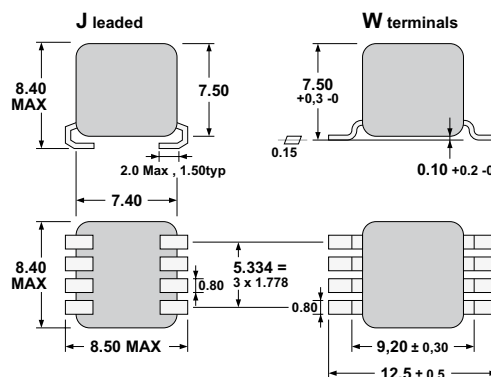
Marking



Connections



Dimensions (mm)

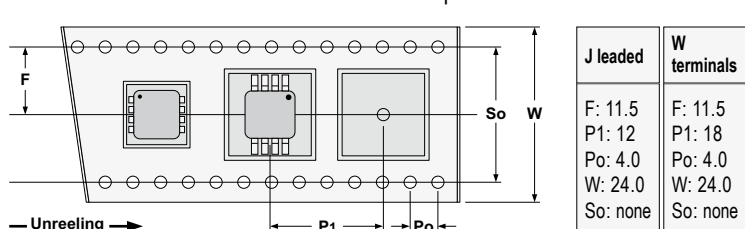


Packaging

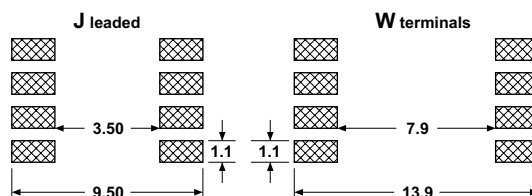
Tape and Reel:

J leaded - 600 units per reel of diameter 330 mm

W terminals - 400 units per reel of diameter 330 mm



PCB Layout (suggested)





SMD Power Inductors - ESI7

- Energy storage, smoothing, filtering
- Applied standards: ECSS-Q-ST-70-02C, MIL-STD-202, DO-160 and ESCC 3201 generic specification for space products
- Materials meet UL94-V0 rating
- Suited for IR and vapor reflow soldering
- Frequency range up to 1 MHz
- Operating temperature range: -55 °C to +125 °C
- Weight: ≤2 grams

Electrical Data (25°C)

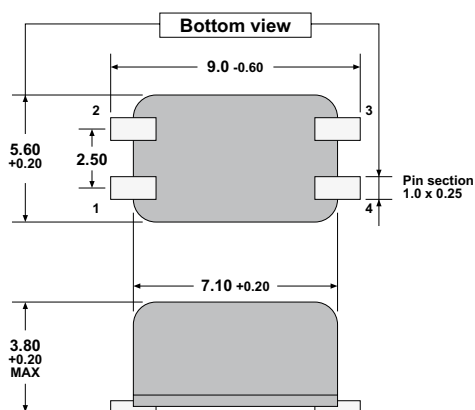
ID Code	Inductance (μH)	permanent (ADC)	I _{peak} A	DCR at 25°C (mΩ)	Tol.
ESI 7 K42 1S	0.42	2.9	6.0	7.5	25
ESI 7 K65 1S	0.65	2.4	5.0	11	
ESI 7 1K2 1S	1.27	1.6	3.6	23	
ESI 7 2K1 1S	2.10	1.3	2.8	36	
ESI 7 3K7 1S	3.74	1.0	2.0	59	
ESI 7 5K0 1S	5.09	0.78	1.8	107	
ESI 7 8K4 1S	8.42	0.60	1.4	177	

To Order

ESI 7 ### 1S

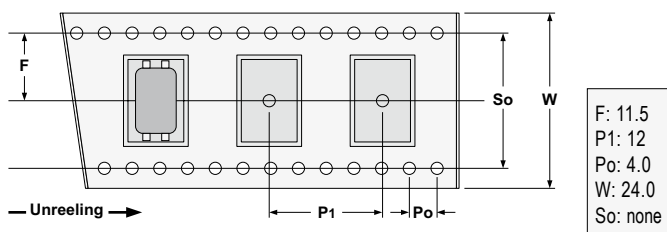
ESI7	###	1	S
SMD Energy Storage Inductor	Value code K42 = 0.42 μH 2K1 = 2.1 μH	Version	SMD Terminals

Dimensions (mm)



Packaging

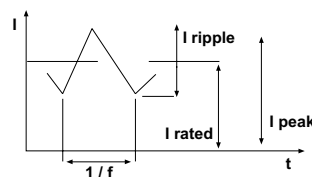
Tape and Reel:
1300 units per reel of diameter 330 mm



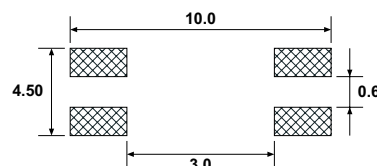
F: 11.5
P1: 12
P0: 4.0
W: 24.0
So: none

Notes

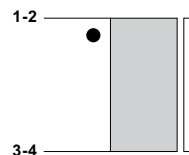
1. Inductance at 10 mV, 10 kHz with WK3260B impedance analyzer
2. Typical inductance value at recommended full load
3. I_{peak} max = maximum peak value of current at +125 °C; L value not guaranteed
4. 10 % admissible I ripple over I rated at f=200 kHz
5. Isolation voltage 150 Vdc
- 1 min - Ri > 100 MΩ between winding and magnetic core



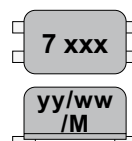
PCB Layout (suggested)



Connections



Marking



yyww : Date code
M : Microspire

