

Chip Inductors - MPC1 12000 Series



- eesa qualified 3201/008 and in accordance to Mil Spec M83446/6
- Excellent Q values even at high frequencies
- Very high self-resonant frequencies (SFRs)
- Extremely stable inductance values from -55°C to +125°C
- With or without tab terminations
- Tin / lead or gold plated terminations
- Frequency range : 790 KHz to 30 MHz
- Operating temperature range : -55°C to +125°C
- Weight : 0.07 gram

Electrical Data (25°C)

ID Code	Inductance* μH	Q Min	Test Freq. MHz	SFR Min. MHz	DCR Max. Ω	DC Current mA max	Tol** %
MPC1 12 012 000	12	42	2.5	26	2.0	110	2
MPC1 12 015 000	15	44	2.5	24	2.2	105	
MPC1 12 018 000	18	44	2.5	21	2.8	100	
MPC1 12 022 000	22	48	2.5	20	3.5	85	
MPC1 12 027 000	27	49	2.5	19	4.3	75	
MPC1 12 033 000	33	50	2.5	14	5.5	68	
MPC1 12 039 000	39	52	2.5	12	6.5	61	
MPC1 12 047 000	47	53	2.5	11	8.5	54	
MPC1 12 056 000	56	56	2.5	10	12	46	
MPC1 12 068 000	68	53	2.5	9.0	13	42	
MPC1 12 082 000	82	49	2.5	8.0	15	40	
MPC1 12 100 000	100	49	2.5	7.0	18	36	
MPC1 12 120 000	120	37	0.79	6.0	21	34	
MPC1 12 150 000	150	30	0.79	5.0	26	31	
MPC1 12 180 000	180	30	0.79	5.0	28	29	
MPC1 12 220 000	220	26	0.79	4.5	32	29	

ID Code	Inductance* μH	Q Min	Test Freq. MHz	SFR Min. MHz	DCR Max. Ω	DC Current mA max	Tol** %
MPC1 12 270 000	270	26	0.79	4.0	36	26	5-10
MPC1 12 330 000	330	24	0.79	3.7	42	24	
MPC1 12 390 000	390	24	0.79	3.5	46	23	
MPC1 12 470 000	470	24	0.79	3.0	68	19	
MPC1 12 560 000	560	22	0.79	2.8	77	18	
MPC1 12 680 000	680	20	0.79	2.5	85	17	
MPC1 12 820 000	820	16	0.79	2.0	100	16	
MPC1 12 1000 000	1000	12	0.79	1.5	120	15	

* Standard inductance tolerance: ± 10%

** Available tolerances.

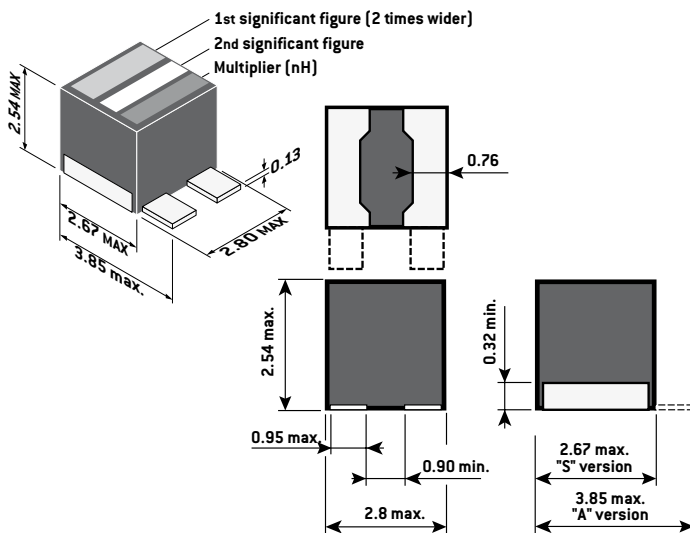
Other inductance values on request.

Inductance variation: 80 PPM/°C max. in the range 12 to 100 μH
35 PPM/°C max. in the range 120 to 1000 μH

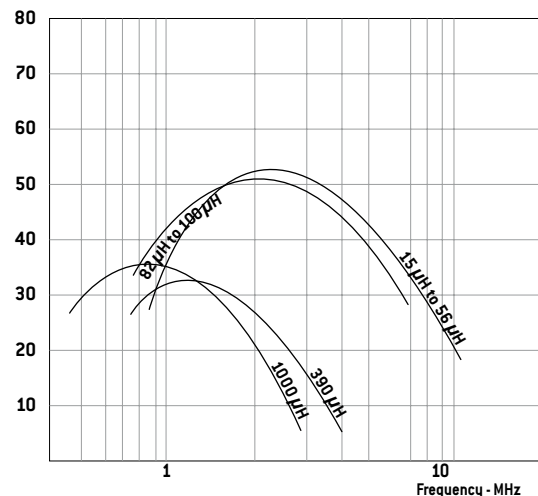
Packaging

Tape and Reel (with or without tab) : 100 pieces min. up to 500 pieces
or Tray : 81 pieces without tab, 49 pieces with tab

Typical Dimensions (mm)



Q vs frequency



Miniature Chip Inductors MSC1 12000

eesa QPL Components

MPCI 12000 series are usually installed on Military applications and breadboards for Space applications.

Since January 2003, Microspire has been manufacturing Radio Frequency Fixed Coils, MPCI 12000 series fulfilling ESA ESCC Generic specification N° 3201 and detail specification N° 3201/008.

This range is named MSC1 (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.

Cross reference chart

Microspire Non-QPL ID Code	Microspire QPL ID Code	ESA SCC Component Part Number	In accordance to MIL Spec M 83446/6 Part Number	
			Dash number With tabs	Dash number Without tab
MPCI 12 012 000 xy 10/5/2	MSCI 12 012 000 xy 10/5/2	3201008 aa b 120 K/J/G	M83446/06-01	M83446/06-25
MPCI 12 015 000 xy 10/5/2	MSCI 12 015 000 xy 10/5/2	3201008 aa b 150 K/J/G	M83446/06-02	M83446/06-26
MPCI 12 018 000 xy 10/5/2	MSCI 12 018 000 xy 10/5/2	3201008 aa b 180 K/J/G	M83446/06-03	M83446/06-27
MPCI 12 022 000 xy 10/5/2	MSCI 12 022 000 xy 10/5/2	3201008 aa b 220 K/J/G	M83446/06-04	M83446/06-28
MPCI 12 027 000 xy 10/5/2	MSCI 12 027 000 xy 10/5/2	3201008 aa b 270 K/J/G	M83446/06-05	M83446/06-29
MPCI 12 033 000 xy 10/5/2	MSCI 12 033 000 xy 10/5/2	3201008 aa b 330 K/J/G	M83446/06-06	M83446/06-30
MPCI 12 039 000 xy 10/5/2	MSCI 12 039 000 xy 10/5/2	3201008 aa b 390 K/J/G	M83446/06-07	M83446/06-31
MPCI 12 047 000 xy 10/5/2	MSCI 12 047 000 xy 10/5/2	3201008 aa b 470 K/J/G	M83446/06-08	M83446/06-32
MPCI 12 056 000 xy 10/5/2	MSCI 12 056 000 xy 10/5/2	3201008 aa b 560 K/J/G	M83446/06-09	M83446/06-33
MPCI 12 068 000 xy 10/5/2	MSCI 12 068 000 xy 10/5/2	3201008 aa b 680 K/J/G	M83446/06-10	M83446/06-34
MPCI 12 082 000 xy 10/5/2	MSCI 12 082 000 xy 10/5/2	3201008 aa b 820 K/J/G	M83446/06-11	M83446/06-35
MPCI 12 100 000 xy 10/5/2	MSCI 12 100 000 xy 10/5/2	3201008 aa b 101 K/J/G	M83446/06-12	M83446/06-36
MPCI 12 120 000 xy 10/5	MSCI 12 120 000 xy 10/5	3201008 aa b 121 K/J	M83446/06-13	M83446/06-37
MPCI 12 150 000 xy 10/5	MSCI 12 150 000 xy 10/5	3201008 aa b 151 K/J	M83446/06-14	M83446/06-38
MPCI 12 180 000 xy 10/5	MSCI 12 180 000 xy 10/5	3201008 aa b 181 K/J	M83446/06-15	M83446/06-39
MPCI 12 220 000 xy 10/5	MSCI 12 220 000 xy 10/5	3201008 aa b 221 K/J	M83446/06-16	M83446/06-40
MPCI 12 270 000 xy 10/5	MSCI 12 270 000 xy 10/5	3201008 aa b 271 K/J	M83446/06-17	M83446/06-41
MPCI 12 330 000 xy 10/5	MSCI 12 330 000 xy 10/5	3201008 aa b 331 K/J	M83446/06-18	M83446/06-42
MPCI 12 390 000 xy 10/5	MSCI 12 390 000 xy 10/5	3201008 aa b 391 K/J	M83446/06-19	M83446/06-43
MPCI 12 470 000 xy 10/5	MSCI 12 470 000 xy 10/5	3201008 aa b 471 K/J	M83446/06-20	M83446/06-44
MPCI 12 560 000 xy 10/5	MSCI 12 560 000 xy 10/5	3201008 aa b 561 K/J	M83446/06-21	M83446/06-45
MPCI 12 680 000 xy 10/5	MSCI 12 680 000 xy 10/5	3201008 aa b 681 K/J	M83446/06-22	M83446/06-46
MPCI 12 820 000 xy 10/5	MSCI 12 820 000 xy 10/5	3201008 aa b 821 K/J	M83446/06-23	M83446/06-47
MPCI 12 1000 000 xy 10/5	MSCI 12 1000 000 xy 10/5	3201008 aa b 102 K/J	M83446/06-24	M83446/06-48
aa	b	K/J/G (tolerance)		
aa = 01 for Au Termination	b = B for Chart III level B	K for ±10%		
aa = 02 for SnPb Termination	b = C for Chart III level C	J for ±5%		
		G for ±2%		

To Order

MPCI	12	#####	x	y	z
Radio Frequency Fixed Coils	Size	Inductance Value (nH) from 012 000 to 1000 000	Terminations x = G for Gold x = T for SnPb	Terminations shape y = S without tab y = A with tab (Not valid for space use)	Tolerance : z = 10 for ±10% z = 5 for ±5% z = 2 for ±2%

MPCI 12 ### ## xy z

