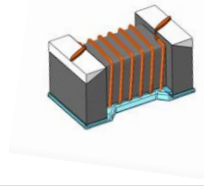


# MWSD-FE Series of Wire Wound Chip Ferrite Inductor



## Overview

The MWSD-FE series of wound ferrite inductors have the characteristics of inductance range of 2.2 $\mu$ h to 47 $\mu$ h, operating temperature range of -40°C ~ +125°C, small size, low DCR and large current. It is especially suitable for Bluetooth headset application.

## Background

Due to the size limitation of Bluetooth earphones, the inductor and other components need to be miniaturized. Therefore, Sunlord has developed MWSD-FE Series of wound ferrite inductors with small size, large inductance and large current, which can fully meet the requirements of Bluetooth earphones.

## Features

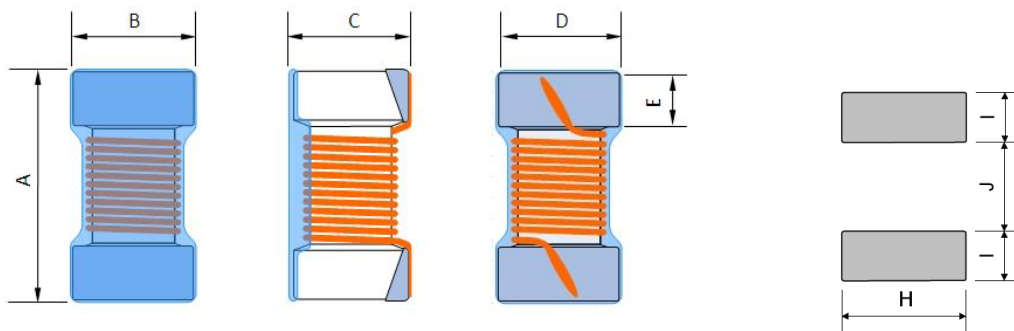
- Winding structure
- Small size, thin height
- Wide inductance range
- Low DCR , High saturation current

## Applications

- Power line circuit for Bluetooth earphones, wireless module, wearable devices, etc.

## Dimensions

MWSD-FE Series



Unit: mm

Series	A	B	C	D Typ.	E Ref.	H Ref.	I Ref.	J Ref.
MWSD1608FE	1.80 Max	1.20 Max	1.00 Max	0.92	0.30	1.15	0.64	0.64
MWSD2012FE	2.40 Max	1.65 Max	1.30 Max	1.28	0.48	1.50	1.02	0.96

## Part Number

MWSD    1608    F    E    2R2    □    T  
 ①            ②            ③            ④            ⑤            ⑥            ⑦

① Type MWSD Wire Wound Chip Inductor		② External Dimensions (L×W) (mm) 1608 [0603] 1.6×0.8 2012 [0805] 2.0×1.25		③ Material Code F Ferrite	
⑤ Nominal Inductance Example Nominal Value 2R2 2.2μH 100 10μH		⑥ Inductance Tolerance K ±10% M ±20%		④ Internal Code E Internal Code	
				⑦ Packing B Bulk Package T Tape & Reel	

## Specifications

### MWSD1608FE TYPE

Part Number	Inductance	Tolerance	L Test Freq.	DC Resistance	Typ. Rated Current	Typ. Self-resonant Frequency
Units	μH	-	MHz	Ω	mA	MHz
Symbol	L	-	Freq.	DCR	I <sub>r</sub>	S.R.F
MWSD1608FE1R0□T	1.0	K,M	7.9	0.30±30%	700	340
MWSD1608FE2R2□T	2.2	K,M	7.9	0.56±30%	580	103
MWSD1608FE4R7□T	4.7	K,M	7.9	0.97±30%	420	51
MWSD1608FE6R8□T	6.8	K,M	7.9	1.50±30%	340	43
MWSD1608FE100□T	10	K,M	2.5	1.85±30%	280	36
MWSD1608FE150□T	15	K,M	2.5	2.60±30%	240	29
MWSD1608FE220□T	22	K,M	2.5	2.80±30%	200	24
MWSD1608FE470□T	47	K,M	2.5	6.65±30%	100	14

### MWSD2012FE TYPE

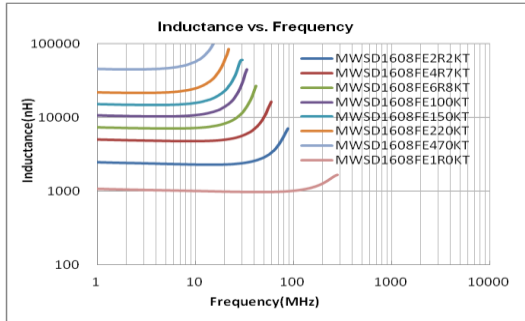
Part Number	Inductance	Tolerance	L Test Freq.	DC Resistance	Typ. Rated Current	Typ. Self-resonant Frequency
Units	μH	-	MHz	Ω	mA	MHz
Symbol	L	-	Freq.	DCR	I <sub>r</sub>	S.R.F
MWSD2012FE2R2□T	2.2	K,M	7.9	0.22±30%	1040	87
MWSD2012FE4R7□T	4.7	K,M	7.9	0.43±30%	840	51
MWSD2012FE6R8□T	6.8	K,M	7.9	0.68±30%	700	46
MWSD2012FE100□T	10	K,M	2.5	0.85±30%	560	31
MWSD2012FE150□T	15	K,M	2.5	1.40±30%	380	28
MWSD2012FE220□T	22	K,M	2.5	1.76±30%	340	20
MWSD2012FE470□T	47	K,M	1	3.40±30%	280	15

※ □: Please specify the inductance tolerance code (K=±10%, M=±20%).

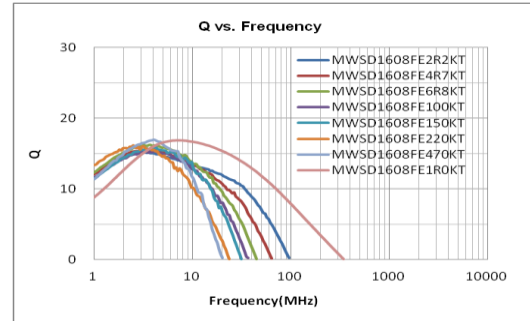
## Electrical Characteristics

### MWSD1608FE TYPE

Inductance vs. Frequency Characteristics

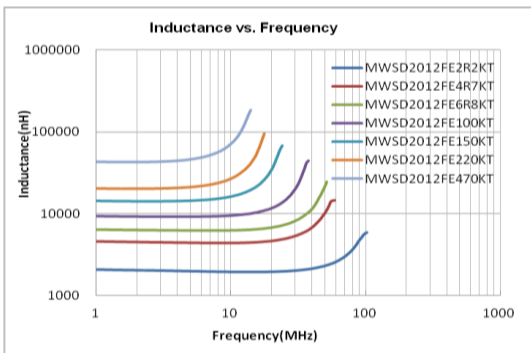


Q vs. Frequency Characteristics

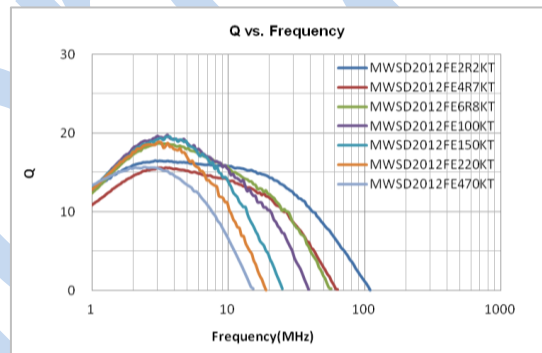


### MWSD2012FE TYPE

Inductance vs. Frequency Characteristics



Q vs. Frequency Characteristics



## Production

Mass production.