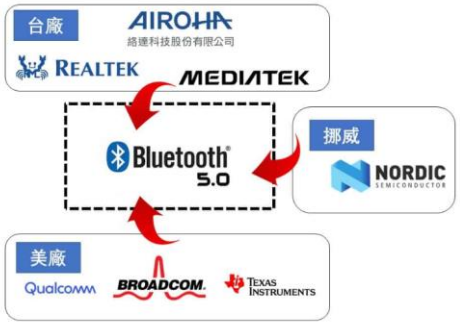
Erocore Enterprise Co.,Ltd

Best solution provider for Power & EMI

Bluetooth Application Guideline



The Most Popular Bluetooth Chip In Market for TWS Earbuds

Brand	Model No.	Bluetooth Version
Airoha	AB1511	4.1
	AB1526	5.0
	AB1526P	5.0
	AB1532	5.0
Appo tech	CW6626B	5.0
	CW6693B	5.0
Actions	BES2000	4.2
	BES2300	5.0
Broadcom	BCM43436	5.0
Cypress	CYW20721	5.0
REALTEK	RTL8763B	5.0
	RTL877X	5.0
Qualcomm	CSR8670	4.2
	A63120	4.2
	CSR8675	5.0
	QCC3020	5.0
	QCC3026	5.0

Bluetooth Technology

Bluetooth is wireless Technology used everywhere. Bluetooth comes with many version of every year which fulfills the demands of users of that year.

Bluetooth 4.2 V.S 5.0 version

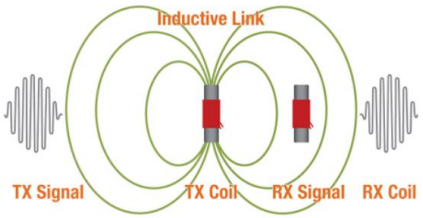
(1) Bluetooth 5 is faster than Bluetooth 4.2 with the format having **2Mbps**, **twice** the speed of Bluetooth 4.2

(2)The latest Bluetooth version, Bluetooth 5 allows low-energy transmissions offering data range for more range. The theoretically proven range for Bluetooth 5 for a maximum of **around 800 feet** which is up to four times the range of Bluetooth 4.2

晶片品牌	晶片型號	藍牙版本
AIROHA 絡達科技股份有限公司	AB1511	4.1
	AB1526	5.0
	AB1526P	5.0
	AB1532	5.0
BROADCOM.	BCM43436	4.2
REALTEK	RTL8736B	5.0
	RTL877X	5.0
Qualcomm	CSR8670	4.2
	A63120	4.2
	CSR8675	5.0
	QCC3020	5.0
	QCC3026	5.0

Comparison of Bluetooth 5.0 Codec

(a)



(b)

(1)NFMI Communication

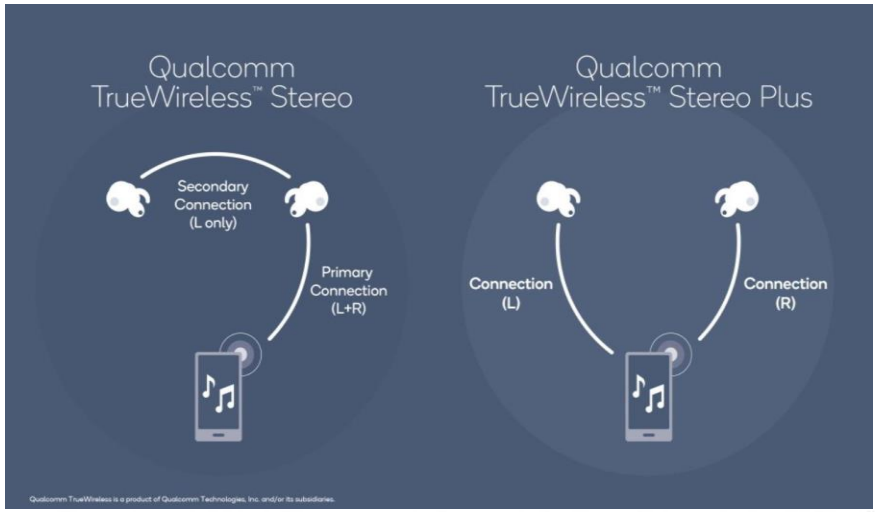
NFMI is a short-range wireless technology that communicates by a tightly coupled magnetic field among devices.
Advantage: Low power consumption, High speed transmission at close range.
Disadvantage: Poor sensing range.

(2)Bluetooth 5.0 TrueWireless Stereo

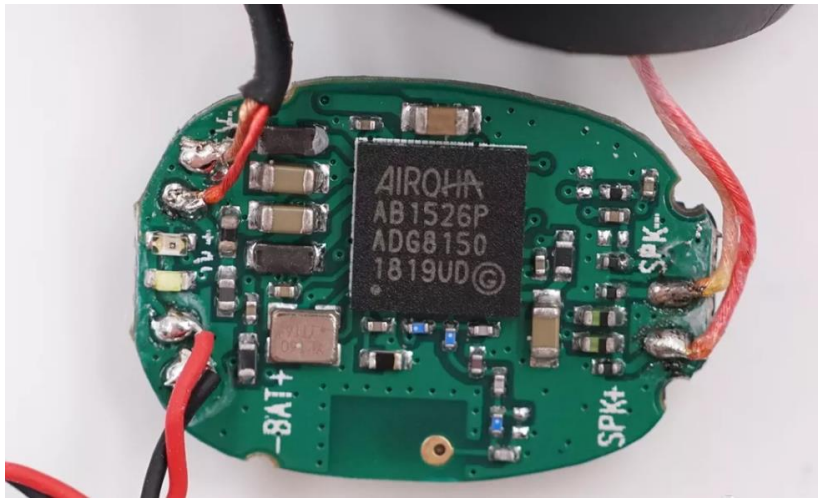
Mainstream Technology for TWS Headset & Earphone(Bluetooth communication) which contains main/secondary connection.
Disadvantage: .More power consumption and interference.

(3)Bluetooth 5.0 TrueWireless Stereo Plus

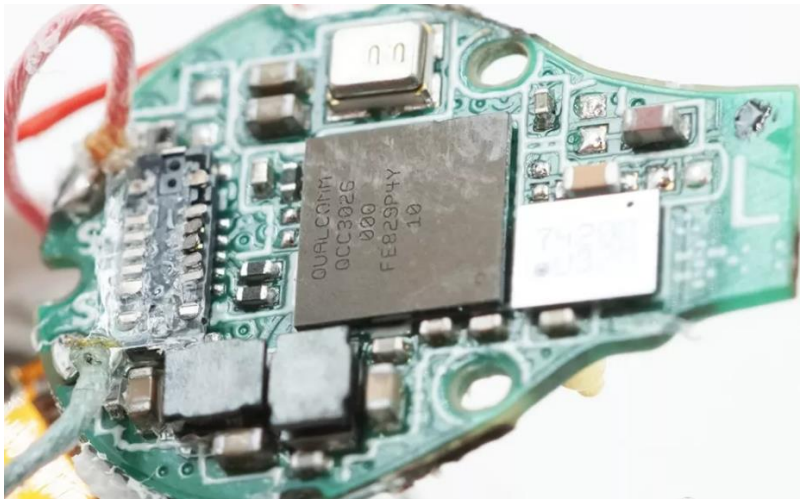
Each connection is independent with higher speed transmission and less power consumption.
EX.: Qualcomm QCC3026



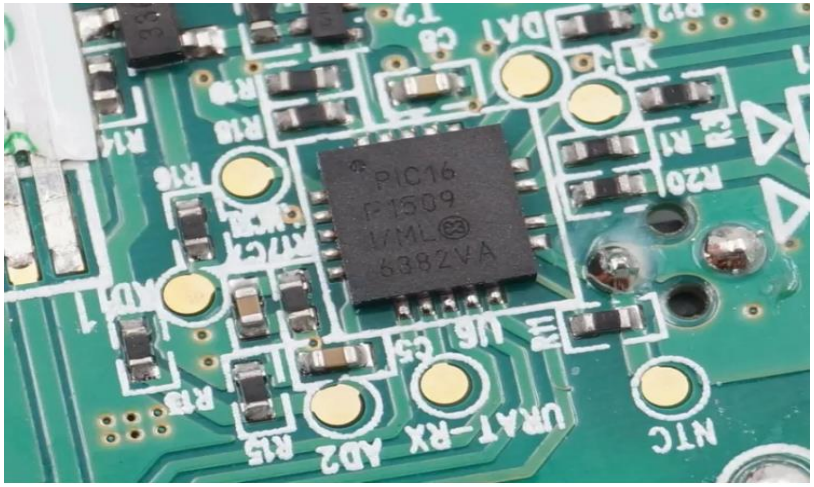
京造TWS Earphone with AIROHA AB1526P



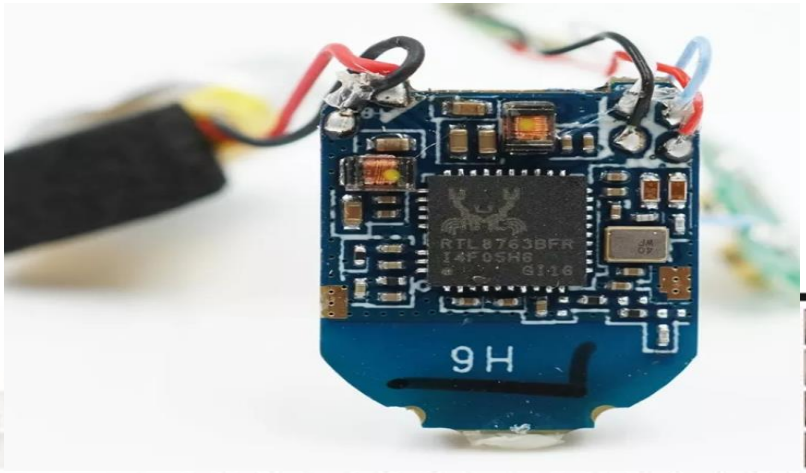
瘋米 FUNCL AL TWS Earphone with Qualcomm QCC 3026



Motorola Verve Ones+ TWS Earphone with Qualcomm CSR8670

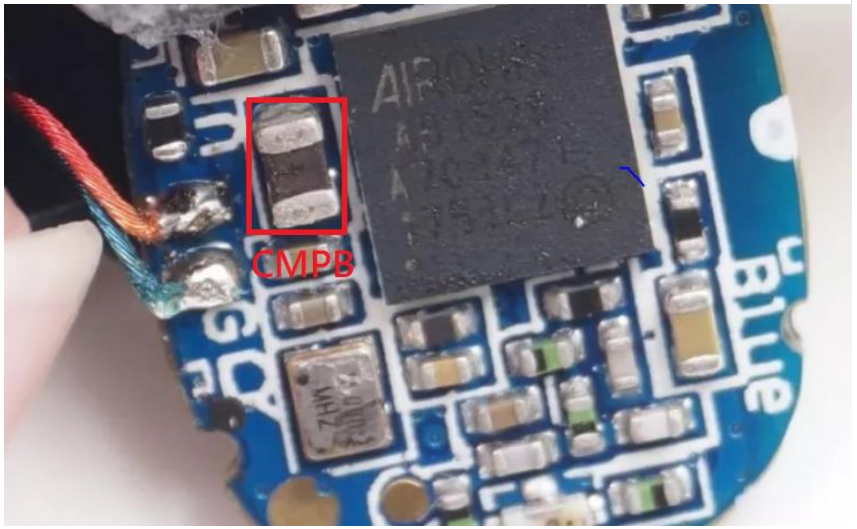


QCY T1 TWS Earphone with REALTECK RTL8763B

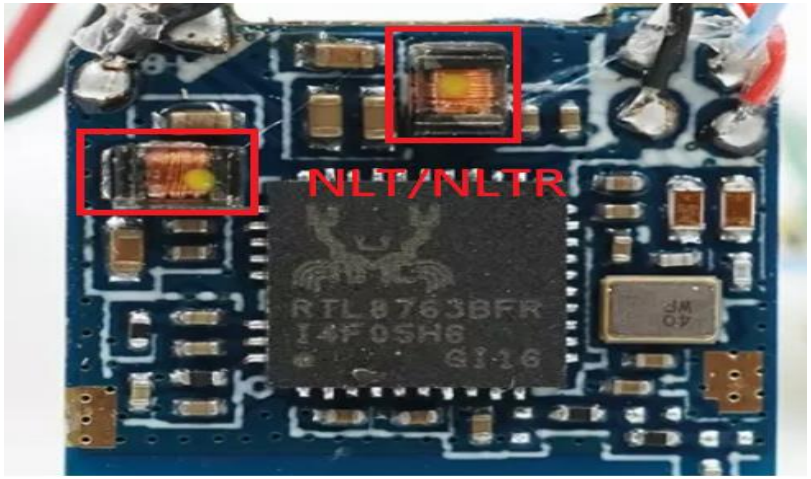


Syllable D15 with AIROHA AB1526P

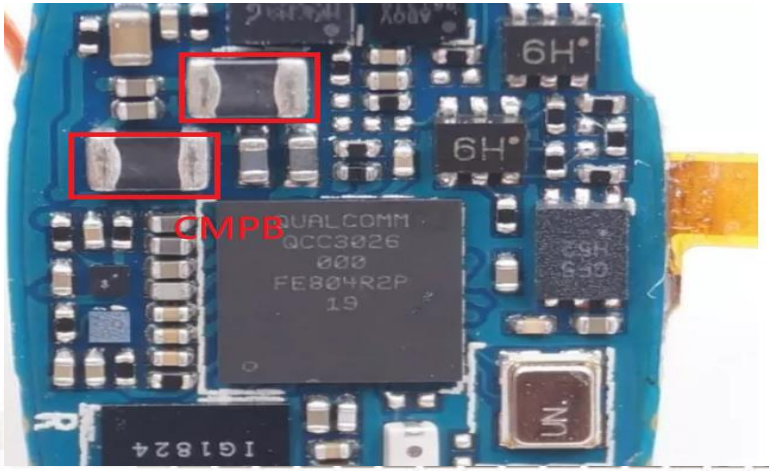
ZOLO Liberty with AIROHA AB1526



QCY T1 TWS Earphone with REALTECK RTL8763B

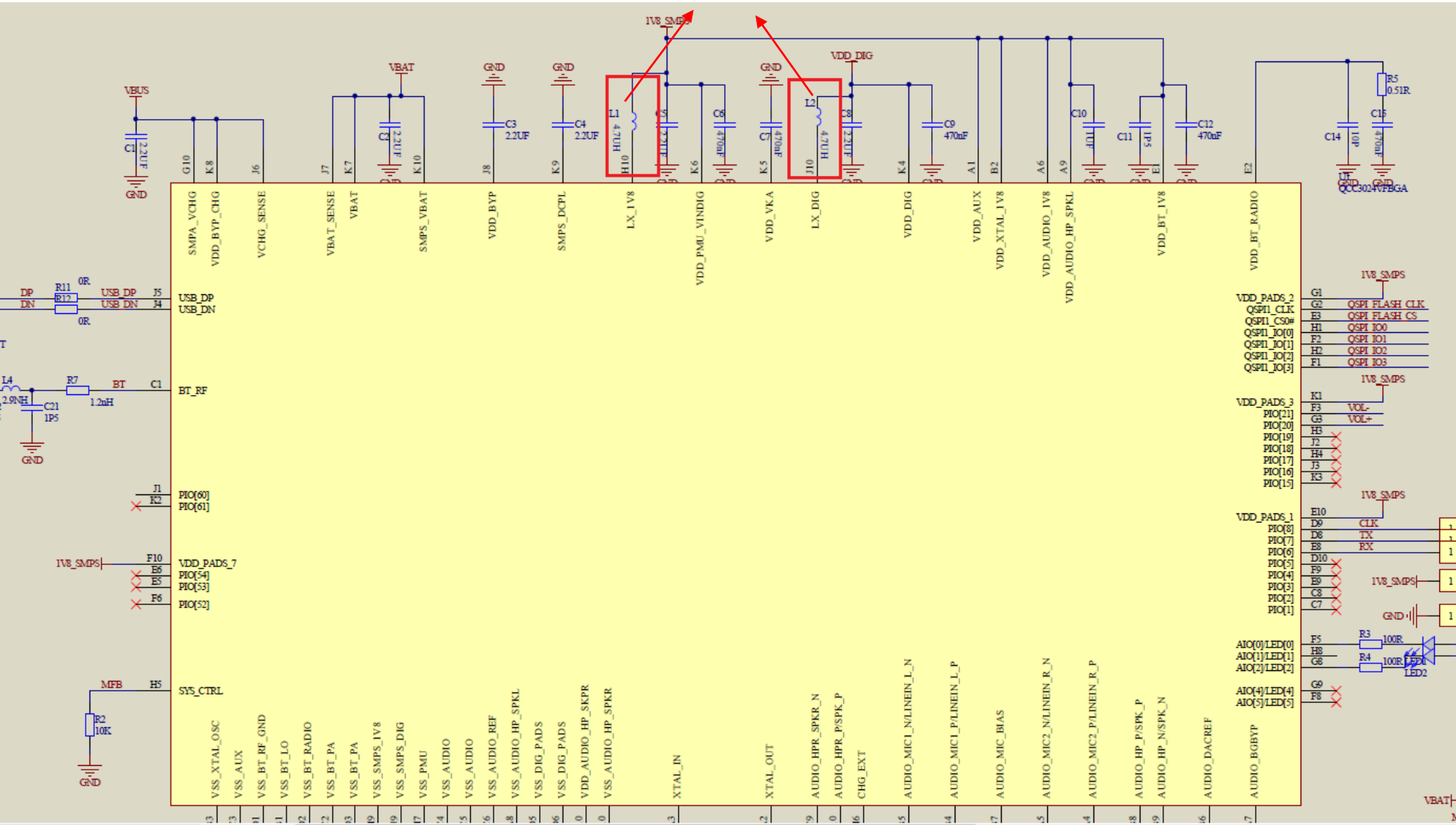


OPPO O-Free TWS Earphone Qualcomm QCC 3026

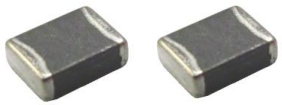


TWS Qualcomm QCC3026

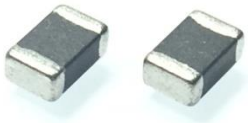
2 Set of DC to DC Output (4.7uH)



TWS Application



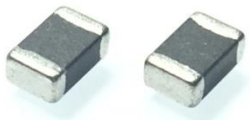
CMPB Series



CL Series

ENRS Series

PIH Series



CP Series

MSC Series

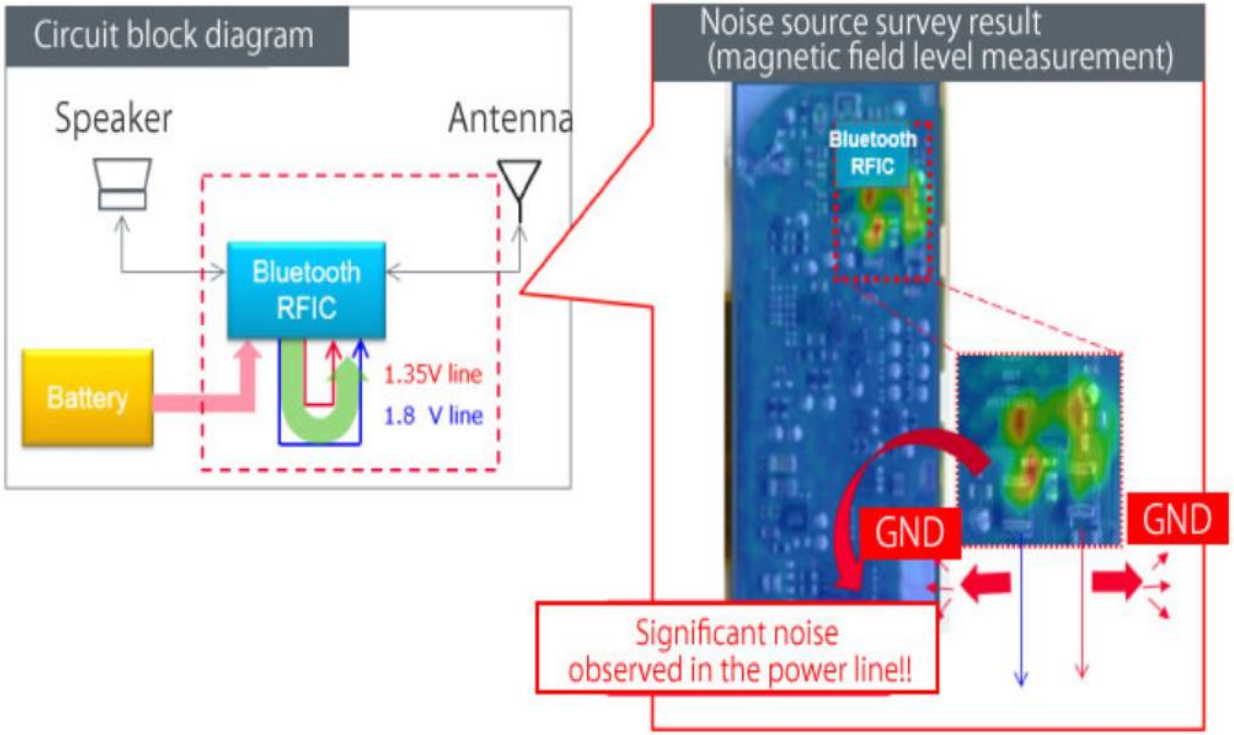
NLT Series

NLTR Series

Erocore TWS Application

Series	Size	Inductance	Rate Current(mA) max.	DCR(Ω) max.
CL	1005	0.22~2.2uH	10~25mA	0.9~1.7Ω
	1608	0.033~33uH	1~50mA	0.2~2.95Ω
	2012	0.022~2.2uH	15~300mA	0.65~0.2Ω
CMPB	160808	0.47~2.2uH	150mA~400mA	0.15~0.3Ω
	201210	0.47~4.7uH	200mA~1100mA	0.09~0.26Ω
	201610	0.47~4.7uH	200mA~1200mA	0.06~0.21Ω
	252010	0.47~6.8uH	300mA~1500mA	0.4~0.18Ω
	252012	0.47~6.8uH	250mA~1500mA	0.04~0.16Ω
NLT	0603	0.47~10uH	400~1400mA	0.075~4.46Ω
	1008	0.078~330uH	90~2700mA	0.042~32.5Ω
	1210	0.39~1000uH	50~4000mA	0.9~46Ω
NLTR	0603	0.68~47uH	110~800mA	0.27~11.2Ω
	0805	1.0~100uH	180~300mA	0.13~7.5Ω
	1008	1.0~470uH	140~1700mA	0.125~22.5Ω
	1210	10.00uH	1000mA	0.3Ω
MSC	0402	1~120nH	30~1360mA	0.045~2.66Ω
	0603	1.6~470nH	80~700mA	0.03~4.35Ω
	0805	2.8~2700nH	160~800mA	0.06~3.8Ω
	1008	10~15000nH	100~1000mA	0.08~11Ω
ENRS	201610	0.24~10 uH	700~4100m A	0.033~0.8Ω
	252010	0.24~15 uH	600~4400m A	0.026~0.78Ω
	252012	0.47~22uH	590~4300mA	0.047~1.52Ω

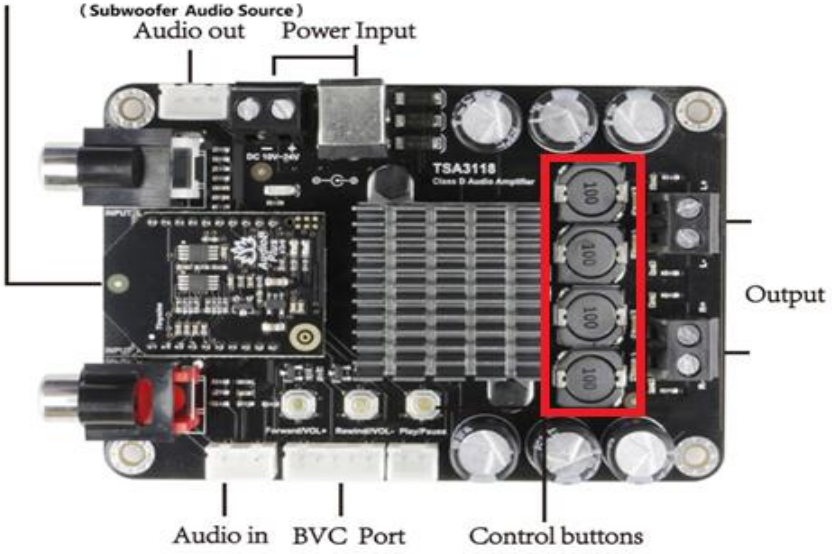
EMI Application for Power Supply Line(Rated Current)

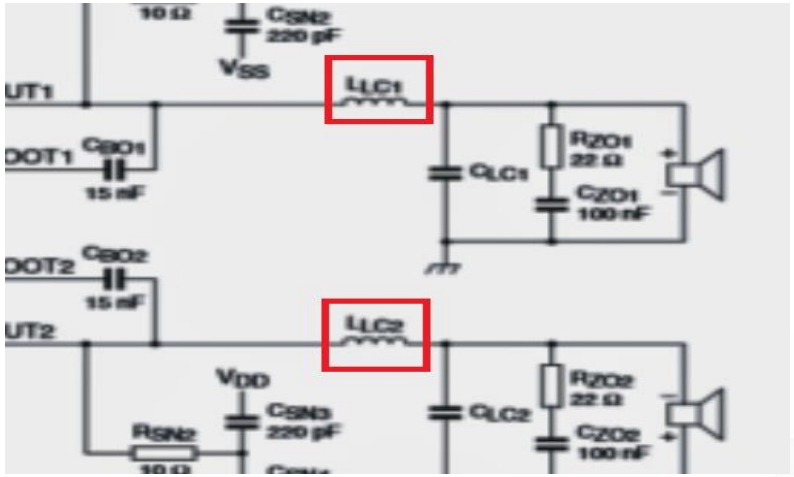


EMI Application for Power Supply Line(Rated Current)

(1)CMPB Series
(2)CP Series
(3)NLT Series
(4)NLTR Series

Class D Amplifier





Class D Amplifier(Power Inductor)

(1)ENRS Series
(2)MPS Series
(3)PIH Series
(4)PI Series

If you require any further information, feel free to contact us☺

E-mail:
william@core.com.tw
sales@core.com.tw
Website:
http://www.core.com.tw/

Thank you!!