

本系列為一般工程用常見之雙併平行之喇叭線

我們提供了下列五種供選購

- 透明 無氧銅+鍍錫銅 ● 透明 無氧銅+無氧銅 ● 紅+黑 無氧銅+無氧銅
 - 白底紅字 無氧銅+無氧銅 ● 白底藍字 無氧銅+無氧銅
- 以便投放在各種市場銷售使用

This series for general engineering purposes is commonly dual and parallel speaker cable.

We offer the following five types for selecting :

- Transparent OFC + tinned copper ● Transparent OFC + OFC
- Red + black OFC + OFC ● Red writing on white background OFC + OFC
- Blue writing on white background OFC + OFC

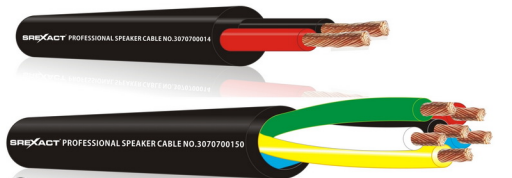
It's convenient to put into a variety of market for sale and usage.



We promises: 我們承諾!

- SUNRISE標準產品均為無氧銅OFC純度至少高於99.97%以上
- 除非客戶指定OEM並簽署圖紙規格,否則不做銅包鋁產品!
- 截面積全數標示為“銅材截面積”而非“導體部份截面積”!
- 供貨長度與包裝相符且為正公差,只多不少!
- SUNRISE standard products are all oxygen-free copper (OFC) with purity at least higher than 99.97%.
- Unless customer OEM specified and confirmed the drawing specification, we never do any copper clad aluminum cables.
- The cross-sectional area is fully labeled as “copper cross-sectional area” instead of “conductor part of the cross-sectional area”!
- The supplied length would be consistent with packing and positive tolerance, just more in stead of less.

MAIN CONDUCTOR		ITEM NO. 型號					CONDUCTOR 導體構成/JACKET TYPE		CONDUCTOR 導體構成	O.D. (mm)	Cond. D.C.R. ohm/1KM 導體電阻/kM	Nom.Cap(pF)/m between conductors. 導體間電容量	其他共通特性
AWG 美規導體直徑	mm² 主要導體直徑	OFC/TC TRANS PAREN PVC	OFC/OFC TRANSPARENT PVC 銅/鍍錫透明皮	OFC/OFC BLACK/RED PVC 黑/紅皮	OFC/OFC WHITE PVC&S RED PRINT 白皮印紅線	OFC/OFC WHITE PVC & BLUE PRINT 白皮印藍線							
12	4.0 3.235	---	---	---	---	---	---	7*23/0.16mm	4.3*8.6	5.43	95.7	Voltage Break down 絕緣承受電壓 300V or better	
	2.5	3070700194	---	---	---	---	---	7*18/0.16mm	4.0*8.0	7.5	89.5	MECHANICAL PERFORMANCE 機械性能 Flex Life load 500g +/-30° 搖晃壽命負載 500g 角度 +/-30°	
14	2.11 1.5	307070002	307070002T	307070002B	307070195W	307070195S	307070195Z	7*15/0.16mm	3.8*7.6	8.62	84.3	Only for installation	
16	1.306 0.824	307070003	307070003T	307070003B	307070004W	307070004B	307070004Z	60/0.18mm	3.5*7.0	12.45	77.6	Tensile Strength (26°C, 65%RH) 拉伸斷裂力量 Only for installation	
20	0.522 0.341	307070005	307070005T	307070005B	307070006W	307070006B	307070006Z	41/0.16mm	2.7*5.4	21.8	73.6	Applicable Temperature 建議工作溫度 -20°C ~ +60°C (-4°F ~ +140°F)	
22	0.221	307070007	307070007T	307070007B	307070007W	307070007Z	17/0.16mm	1.9*3.8	93.25	56.6	62.07	Peak Temperature 極限工作溫度 -40°C ~ +70°C (-40°F ~ +158°F)	
26	0.14	307070008	307070008T	307070008B	307070008W	307070008Z	7/0.16mm	1.6*3.2	148.94	54.5			



UL CL2X CL3X

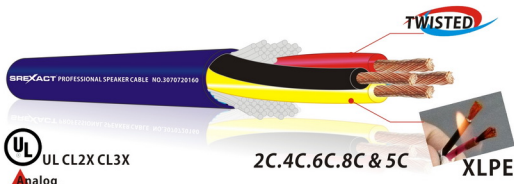


2C.4C.6C.8C

主要提供MI 樂器通路市場使用之喇叭線
 對成本低,外皮採用PVC充實押出為正圓,提供流動演出使用的軟質喇叭線
 有外被保護,可避免適當於惡劣環境下被踩踏或劃破!

Designed for MI market providing flexible speaker cable used in mobile performance
 It has cable jacket for protecting.Can avoid exposure under harsh environments. To be stepped or broken

MAIN CONDUCTOR		ITEM NO./型號				CONDUCTOR/導體構成				JACKET O.D.			CONDUCTOR 導體構成	Cond D.C.R. ohm/1KM 導體電阻/1KM	Nom.Cap.(pF/m)be tween conductors. 導體間電容量/ 最近兩導體	其他共通特性
AWG 美規導體 直徑	mm ² 主要導體 直徑	2C OFC	O.D. (mm)	4C OFC	O.D. (mm)	6C OFC	O.D. (mm)	8C OFC	O.D. (mm)	JACKET TYPE: PVC						
4.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Voltage Breakdown 絕緣承受電壓
12	3.235	3070700014	9	3070700019	11	3070700150	13.5	3070700153	15	65/0.254mm	5.43	143.09	600V	MECHANICAL PERFORMANCE 機械性能		
	2.5	3070700142	8.3	3070700159	10	3070700157	12.5	3070700156	14	50/0.254mm	7.8	131.2				
14	2.077	3070700015	8.0	3070700020	10	3070700151	12.0	3070700154	13	41/0.254mm	8.62	123.5	Flex Life load 500g +/-30" 搖晃壽命負載 500g 角度 +/-30"			
	1.5	3070700147	7.2	3070701820	9.0	3070701830	11.0	3070701840	12	30/0.254mm	12.6	113.2	3070700015>3700 3070700020>9960			
	1.306	3070700016	7.0	3070700021	9.0	3070700152	10.5	3070700155	11.5	65/0.16mm	13.7	106.5	Tensile Strength (26°C, 65%RH) 拉伸斷裂力量			
	1.045	3070700017	6.5	3070700022	8.0	-----	-----	-----	-----	52/0.16mm	17.2	103	3070700015>68kgf 3070700020>71kgf			
18	0.824	3070700018	6.0	3070700023	7.0	-----	-----	-----	-----	41/0.16mm	21.8	101.2	Applicable Temperature 建議工作溫度			
	20	0.522	3070700024	5.5	-----	-----	-----	-----	-----	26/0.16mm	34.6	57.4	-20°C~ +60°C(-4°F~ +140°F)			
	22	0.341	-----	-----	-----	-----	-----	-----	-----	17/0.16mm	55.0	49.1	Peak Temperature 極限工作溫度			
	24	0.221	-----	-----	-----	-----	-----	-----	-----	11/0.16mm	93.25	---	-40°C~ +70°C(-40°F~ +158°F)			



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UL CL2X CL3X

Analog

Broadcast Studio SPM Installation Touring HomeHi

針對專業流動演出市場所設計的喇叭線

- 1.銅絲較細,增大表面積
 - 2.交連PE絕緣,耐熱與電性能優於PVC
 - 3.棉紗填充,讓線纜耐拉
 - 4.高品質PVC外殼,依照需要提供皇家藍與黑色兩種產品
- 設計有5C款式以配合d&b之超低音喇叭使用

The designed speaker cable aiming at the market of professional mobile performance:

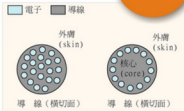
1. Copper wire is thinner, increasing surface area
 2. XLPE insulation, heat-resistance and electrical property are superior than PVC
 3. Cotton filling makes cable pull-resistance
 4. High quality PVC jacket, providing royal blue and black two products according to requirement.
- Designing 5C style to match the usage of d&b sub-woofer speaker.

AWG 美規導線 直徑	mm ² 主要導線 直徑	ITEM NO.型號 CONDUCTOR 導體構成/DACKET TYPE										CONDUCTOR 導體構成	Cond D.C.R. ohm/1KM 導體電阻/1KM	Nom.Cap.(pF/m) between conductors. 導體間電容量/ 最近兩導體	其他共通特性	
		2C OFC	O.D. (mm)	4C OFC	O.D. (mm)	6C OFC	O.D. (mm)	8C OFC	O.D. (mm)	5C OFC	O.D. (mm)					
XLPE + ROYAL BLUE PVC JACKET /交連 PE + 藍色外殼																
4.0	3.07 07 20167	10.5	3.07 07 20168	12.0	3.07 07 20172	15	3.07 07 20173	16	3.07 07 20171	14	3*26,0.254	4.31	333.27	Voltage Breakdown 絕緣承受電壓 300V OR BETTER		
12	3.235	---	---	---	---	---	---	---	---	---	---	---	---	MECHANICAL PERFORMANCE 機械性能		
	2.5	3.07 07 20151	8.7	3.07 07 20160	10.5	3.07 07 20163	12.5	3.07 07 20165	14.0	---	7*46/010mm	7.8	281.24	Flex Life load 500g +/- 30° 搖擺壽命負載 500g 角度 +/- 30°		
14	2.077	3.07 07 20015	8.5	3.07 07 20174	10.0	3.07 07 20175	12.0	3.07 07 20176	13.5	---	7*37/010mm	9.34	268.51	3070720151 's data is better than 28000		
	1.5	3.07 07 20177	8.0	3.07 07 20178	9.2	3.07 07 20179	11.5	3.07 07 20180	12.5	---	7*27/010mm	12.8	247.62	Tensile Strength (26°C, 65%RH) 拉伸斷裂力量		
NORMAL PE + BLACK PVC JACKET 一般 PE + 黑色外殼																
4.0	3.07 07 20181	10.5	3.07 07 20182	12.0	3.07 07 20183	15	3.07 07 20184	16	3.07 07 20185	14	3*26,0.254	4.31	201.17	3070720151 's data is better than 103kgf		
12	3.235	---	---	---	---	---	---	---	---	---	---	---	---	Applicable Temperature 建議工作溫度		
	2.5	3.07 07 20186	8.7	3.07 07 20187	10.5	3.07 07 20188	12.5	3.07 07 20189	14.0	---	7*46/010mm	7.8	174.82	-20°C ~ +60°C (-4°F ~ +140°F)		
14	2.077	3.07 07 20190	8.5	3.07 07 20191	10.0	3.07 07 20192	12.0	3.07 07 20193	13.5	---	7*37/010mm	9.34	166.91	Peak Temperature 極限工作溫度		
	1.5	3.07 07 20194	8.0	3.07 07 20195	9.2	3.07 07 20196	11.5	3.07 07 20197	12.5	---	7*27/010mm	12.8	150.57	-40°C ~ +70°C (-40°F ~ +158°F)		

專業知識 INFO

集膚效應 (又稱趨膚效應)

是指導體中有交流電或交變電磁場時, 導體內部的電流分布不均勻的一種現象。隨著與導體表面的距離逐漸增加, 導體內的電流密度呈指數式減小, 即導體內的電流會集中在導體的表面。從與電流方向垂直的橫切面來看, 導體的中心部分電流強度基本為零, 即幾乎沒有電流通過, 只在導體邊緣的部分會有電流, 簡單而直觀就是電流集中在導體的「皮膚」部分, 所以稱為集膚效應。產生這種效應的原因主要是變化的電磁場在導體內部產生了渦旋電場, 與原來的電流相抵消, 該效應與傳輸的頻率成正比, 頻率越高, 該效應越嚴重, 因此使用總截面積在相同截面積下, 有助於提升導體的傳導使用率!!



Skin effect

It means when conductor has AC or alternating electromagnetic field, the internal conductor has a condition of current uneven spread. Going with gradually increased on distance from the surface of the conductors, the current density of conductor shows exponential decreased. That's the current of conductor will be concentrated in the surface of conductor. Viewing from the cross section of being vertical with current direction, the current intensity of the central portion on conductor is substantially zero. It almost no current flows through, only the edge of part conductor has current. Simply speaking, the current is concentrating on the "skin" portion of conductor. So it is called as the skin effect.

The reason caused such effect is mainly on the change of the electromagnetic field produced the vortex electric field inside of conductor, offsetting with the original current. This effect with the transmission frequency is proportional, the higher of frequency, the effect is more serious

So using copper with fine core in the same cross-sectional area, will be helpful to improve the cable conduction usage rate!