

NANONICS Coaxial Connectors Introduction



The NANONICS 50 ohm coaxial connector system combines the benefits of the rectangular DUALOBE connectors while offering the flexibility to terminate up to nine coaxial contacts within the same metal connector housing. Furthermore, with this unique design, five signal

contacts, terminated with 30 AWG or smaller discrete wire, can also be integrated into this connector package. These connectors are typically used in applications with frequencies up to 20 GHz.

RG-178 coax coaxial cable is the standard cable used on these connectors. The

receptacle coax connector is also available in a horizontal surface mount configuration allowing for wire to board applications. Harness assemblies and custom configurations can also be accommodated.

Specifications

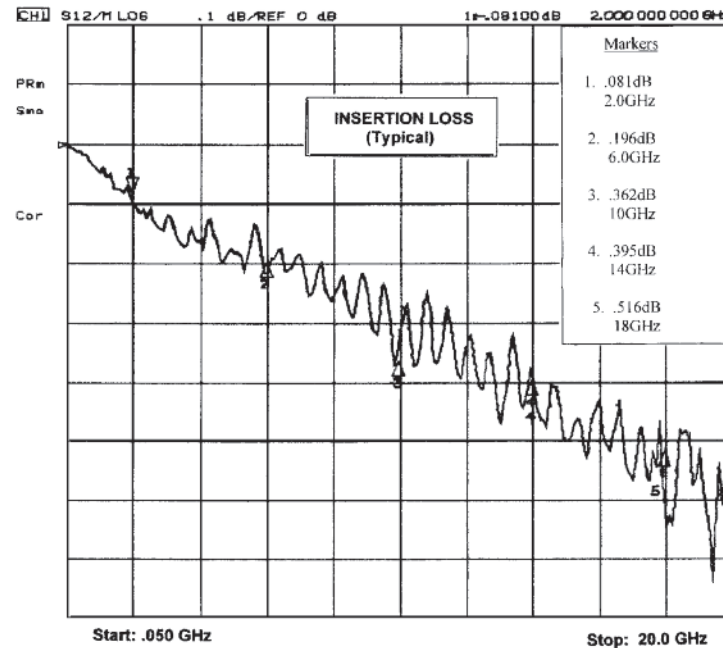
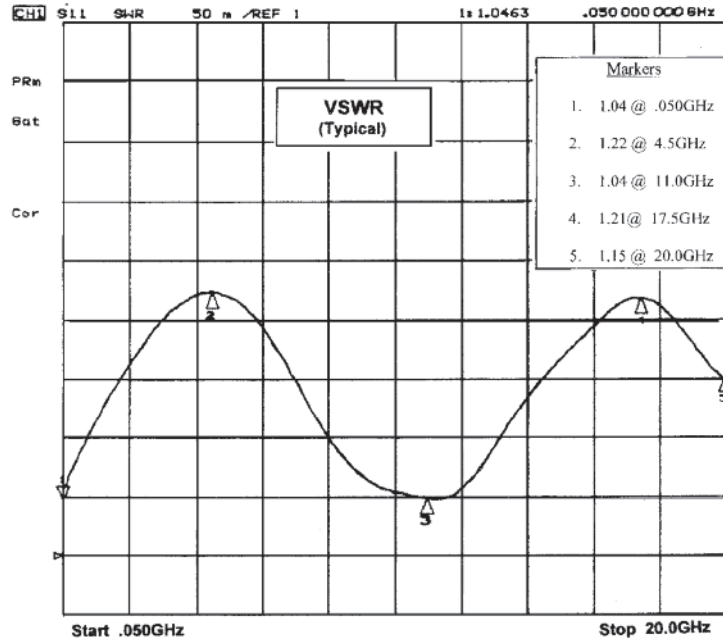
Technical and Performance Data

- Electrical Contact Resistance** — .003 - .008 ohms
- Current Rating** — 1 amp max. per contact
- Dielectric Withstanding Voltage** — Volts RMS 60 Hz at room ambient conditions. At sea level 500V. At 70,000 ft. 150V.
- Insulation Resistance** — 5000 megohms min. (@ 500 VDC) at room ambient conditions.

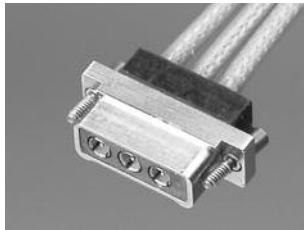
- Magnetic Permeability** — 2 mu max.
- Temperature Range** — -55°C to +125°C
- Outer Coaxial Contacts** — BeCu Alloy plated with gold per MIL-G-45204 over nickel
- Dielectric Insert** — PTFE
- Braid Termination** — Soldered to outer coaxial contacts with Sn63Pb37 solder
- Backpotting** — Standard for wire terminations

NANONICS Typical VSWR and Insertion Loss

Note: Insertion Loss of 30 AWG Coax Cable @ (50 Ohm) is approximately 1.0db/ft. @ 3 GHz. The connector system with 6" of coax on each side, is better than 1.5db @ 3 GHz.



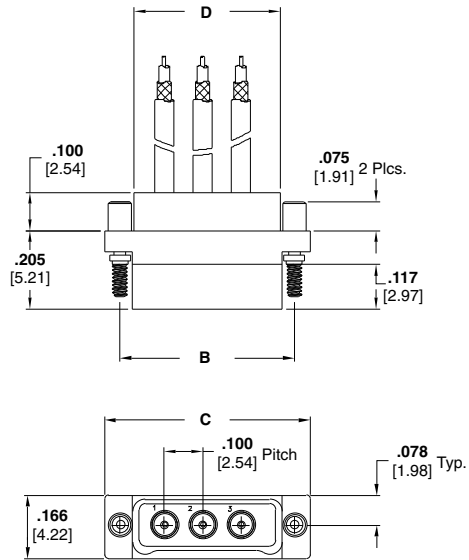
NANONICS 50 Ohm Coax Connectors



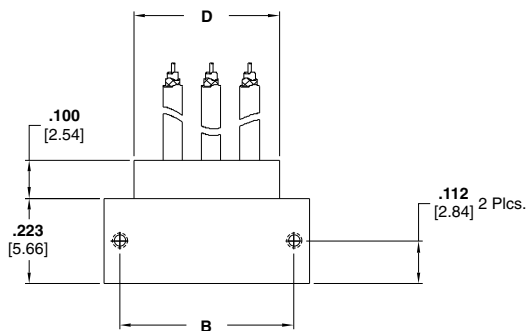
Plug



Receptacle



Plug Assembly
Drawing Number 1589070



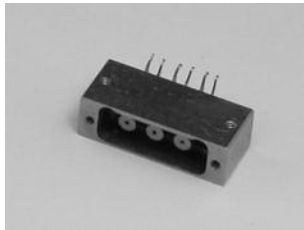
Receptacle Assembly
Drawing Number 1589071

Product Facts

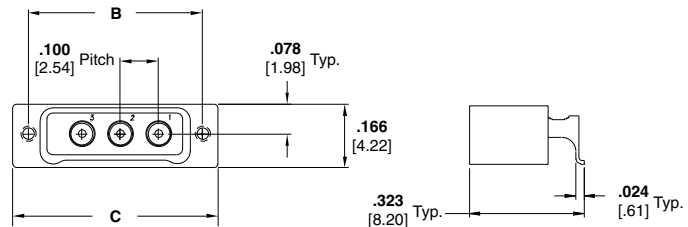
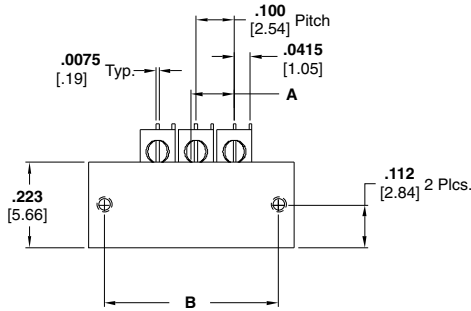
- Metal Shell
- Standard Sizes: 1-9
- Factory wired to your specifications
- Contact TE Connectivity for custom configurations

Size	Dimensions			No. Coax
	B	C	D	
1	0.254 [6.45]	0.335 [8.51]	0.180 [4.57]	1
2	0.354 [8.99]	0.435 [11.05]	0.280 [7.11]	2
3	0.454 [11.53]	0.535 [13.59]	0.380 [9.65]	3
4	0.554 [14.07]	0.635 [16.13]	0.480 [12.19]	4
5	0.654 [16.61]	0.735 [18.67]	0.580 [14.73]	5
6	0.754 [19.15]	0.835 [21.21]	0.680 [17.27]	6
7	0.854 [21.69]	0.935 [23.75]	0.780 [19.81]	7
8	0.954 [24.23]	1.035 [26.29]	0.880 [22.35]	8
9	1.054 [26.77]	1.135 [28.83]	0.980 [24.89]	9

NANONICS Horizontal SMT 50 Ohm Coax Connectors



Surface Mount



Receptacle Assembly
Drawing Number 1589072

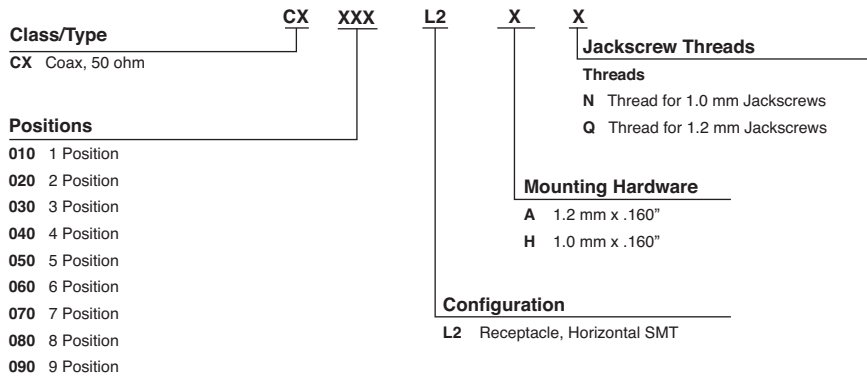
Product Facts

- Metal Shell
- Standard Sizes: 1-9
- Factory wired to your specifications
- Contact TE Connectivity for custom configurations

Size	Dimensions			No. Coax
	A	B	C	
1	0.0125 [.32]	0.254 [6.45]	0.335 [8.51]	1
2	0.0625 [1.59]	0.354 [8.99]	0.435 [11.05]	2
3	0.1125 [2.86]	0.454 [11.53]	0.535 [13.59]	3
4	0.1625 [4.13]	0.554 [14.07]	0.635 [16.13]	4
5	0.2125 [5.40]	0.654 [16.61]	0.735 [18.67]	5
6	0.2625 [6.67]	0.754 [19.15]	0.835 [21.21]	6
7	0.3125 [7.94]	0.854 [21.69]	0.935 [23.75]	7
8	0.3625 [9.21]	0.954 [24.23]	1.035 [26.29]	8
9	0.4125 [10.48]	1.054 [26.77]	1.135 [28.83]	9

Part Numbering Guideline for NANONICS Horizontal SMT 50 Ohm Coax Connectors

Coax Only Connectors - SMT Termination



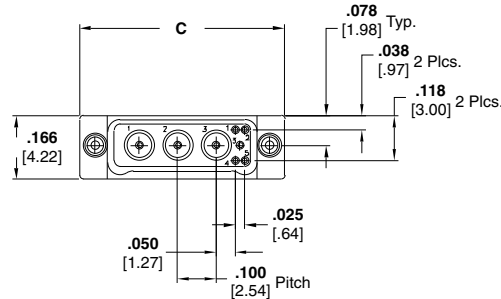
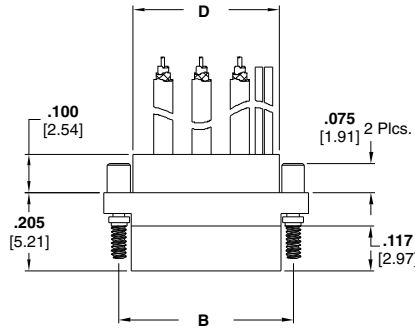
NANONICS 50 Ohm Coax with Mixed Signal Connectors



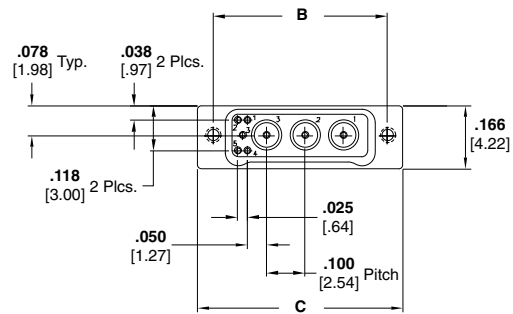
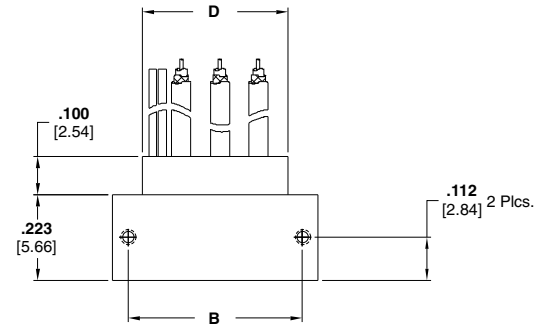
Plug



Receptacle



Plug Assembly
Drawing Number 1589068



Receptacle Assembly
Drawing Number 1589069

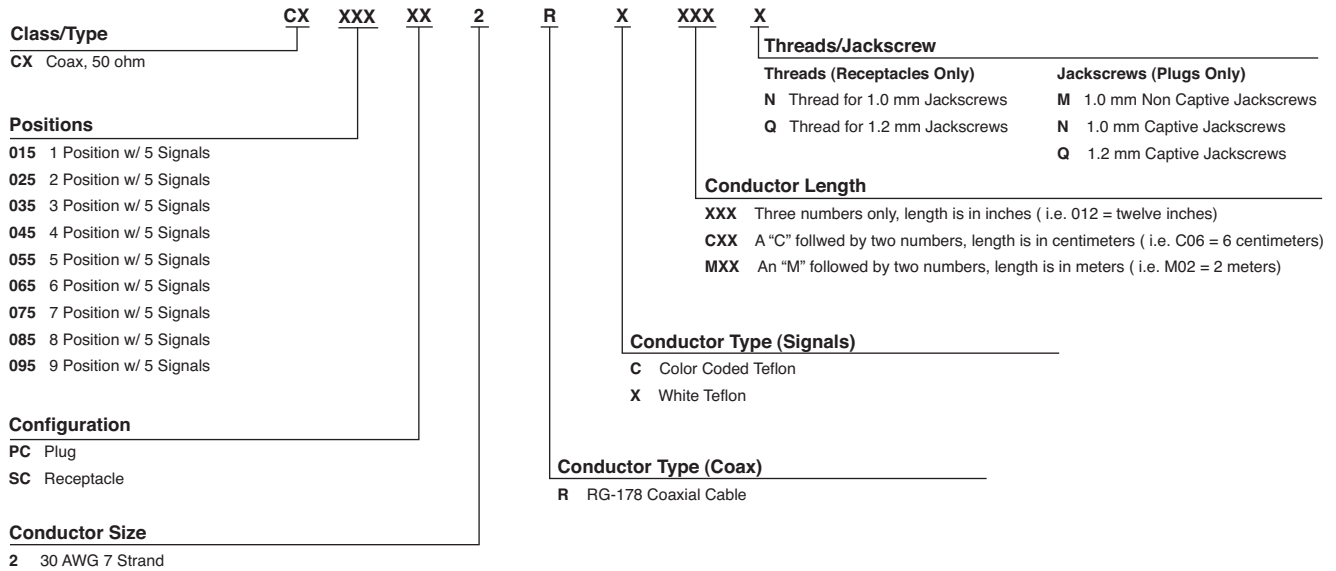
Product Facts

- Metal Shell
- Standard Sizes: 1-9 coaxial contacts with 5 signal contacts
- Factory wired to your specifications
- Contact TE Connectivity for custom configurations

Size	Dimensions			No. Coax
	B	C	D	
1	0.254 [6.45]	0.335 [8.51]	0.180 [4.57]	1
2	0.354 [8.99]	0.435 [11.05]	0.280 [7.11]	2
3	0.454 [11.53]	0.535 [13.59]	0.380 [9.65]	3
4	0.554 [14.07]	0.635 [16.13]	0.480 [12.19]	4
5	0.654 [16.61]	0.735 [18.67]	0.580 [14.73]	5
6	0.754 [19.15]	0.835 [21.21]	0.680 [17.27]	6
7	0.854 [21.69]	0.935 [23.75]	0.780 [19.81]	7
8	0.954 [24.23]	1.035 [26.29]	0.880 [22.35]	8
9	1.054 [26.77]	1.135 [28.83]	0.980 [24.89]	9

Part Numbering Guideline for NANONICS 50 Ohm Coax with Mixed Signal Connectors

Coax w/ Mixed Signal Connectors - Wire Terminations



Part Number Index Cross Reference

NANONICS Part Number	TE Part Number	NANONICS Part Number	TE Part Number	NANONICS Part Number	TE Part Number
Coax Only		Coax with Mixed Signals		Horizontal SMT Coax	
CX010PC2RG006N	0-1589070-1	CX015PC2RC012	0-1589068-1	CX010L2AQ	1-1589072-3
CX010PC2RG018N	0-1589070-2	CX015PC2RC012N	0-1589068-5	CX010L2HN	0-1589072-1
CX010PC2RG048Q	2-1589070-8	CX015SC2RC012N	0-1589069-1	CX020L2HN	1-1589072-2
CX010PC2RG072N	0-1589070-3	CX035PC2RC006N	0-1589068-2	CX030L23N	0-1589072-2
CX010PC2RGC10Q	2-1589070-1	CX035PC2RC018N	0-1589068-3	CX030L23Q	0-1589072-5
CX010SC2RG048Q	2-1589071-3	CX035SC2RC006N	0-1589069-2	CX030L2HN	0-1589072-3
CX020PC2RG018N	0-1589070-4	CX035SC2RC018N	0-1589069-3	CX040L2AQ	1-1589072-0
CX020PC2RG048N	2-1589070-5	CX045PC2RC006N	0-1589068-4	CX040L2HN	1-1589072-6
CX020PC2RG060N	1-1589070-8	CX045PC2RC036N	0-1589068-9	CX050L23Q	0-1589072-6
CX020SC2RG012N	2-1589071-0	CX045PC2RC036Q	1-1589068-0	CX050L2HN	0-1589072-9
CX020SC2RG018N	2-1589071-5	CX045SC2RC006N	0-1589069-4	CX060L2AQ	1-1589072-1
CX020SC2RG024N	0-1589071-8	CX045SC2RC006Q	0-1589069-7	CX060L2HN	1-1589072-5
CX020SC2RG024Q	2-1589071-8	CX055PC2RC006N	0-1589068-6	CX070L2AQ	1-1589072-4
CX020SC2RG060N	2-1589071-2	CX055SC2RC006N	0-1589069-5	CX080L2HN	0-1589072-4
CX030PC2RG006N	0-1589070-5	CX095PC2RC006N	0-1589068-7		
CX030PC2RG012	0-1589070-6	CX095PC2RC036N	0-1589068-8		
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RF Connectors