

DO NOT  
SCALE FROM  
THIS PRINT

DESIGNED AND DIMENSIONED IN MILLIMETERS[INCHES]  
ALL DIMENSIONS REFERENCE EXCEPT AS SHOWN

 THIS PRODUCT MANUFACTURED  
WITH LEAD-FREE PROCESSING

CABLE CALLOUT  
LL110: MWC-LL110-FAA1-0  
END 1 CONNECTOR  
(SEE TABLE 2, SHT 2)  
END 2 CONNECTOR  
(SEE TABLE 2, SHT 2)  
OVERALL ASSEMBLY LENGTH (OAL)  
XXXX (MILLIMETERS)  
(0100 MIN)  
(SEE NOTE 7)

NO. OF PHASE MATCHING CABLES  
-XX: (XX CABLE FOR THIS PART NUMBER)  
(XX CAN BE 02 TO 16)  
-BLANK: 1 CABLE FOR THIS PART NUMBER, ONLY  
AVAILABLE WITH NO PHASE MATCHING OPTION  
PHASE MATCHING SPEC (RANGE)  
-1: 1 PICO-SECOND  
-2: 2 PICO-SECONDS  
-5: 5 PICO-SECONDS  
-BLANK: NO PHASE MATCHING

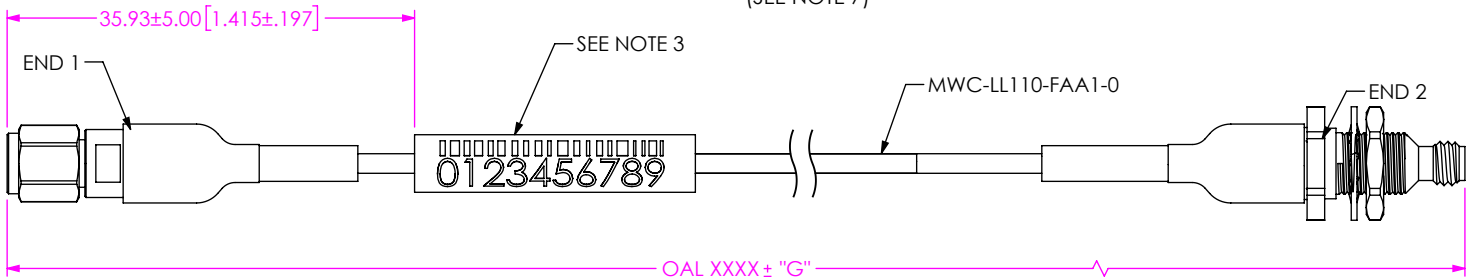


FIG 1  
LL110-A-10SP-10BJ-XXXX-X-XX SHOWN  
(PROTECTIVE CAPS NOT SHOWN FOR CLARITY)

| TABLE 1                   |                           |
|---------------------------|---------------------------|
| OVERALL LENGTH            | "G"                       |
| 0100-0300 [5.98-11.81]    | +5.0 [.20] / -0.0 [.00]   |
| 0301-1500 [11.85-59.01]   | +12.0 [.47] / -0.0 [.00]  |
| 1501-3000 [59.09-118.11]  | +25.0 [.98] / -0.0 [.00]  |
| 3001-7500 [118.15-295.28] | +50.0 [1.97] / -0.0 [.00] |
| 7501-9999 [295.31-393.67] | +1% / -0.0 [.00]          |

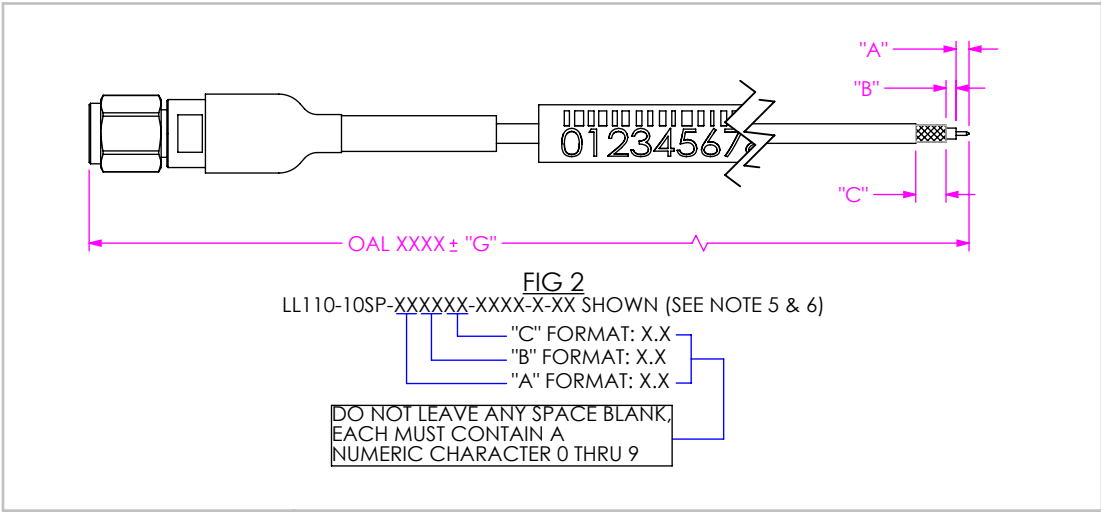


FIG 2  
LL110-10SP-XXXXXX-XXXX-X-XX SHOWN (SEE NOTE 5 & 6)

"C" FORMAT: X.X  
"B" FORMAT: X.X  
"A" FORMAT: X.X

DO NOT LEAVE ANY SPACE BLANK;  
EACH MUST CONTAIN A  
NUMERIC CHARACTER 0 THRU 9

NOTES:

1. CONNECTORS TO BE ORIENTED ACCORDING TO CO-RF-WI-3048-M.
2. CABLE ASSEMBLY TO HAVE PROTECTIVE CAP ASSEMBLED ON EACH END AND TO BE INDIVIDUALLY PACKAGED IN ESD BAG.
3. ASSEMBLY TO BE 100% TESTED FOR RETURN LOSS AND INSERTION LOSS. LABEL EACH INDIVIDUAL CABLE ASSEMBLY WITH 1 LABEL-SER-02. RETURN LOSS SPECIFICATION IS EQUAL TO THE HIGHEST END OPTION LIMIT (SEE TABLE 3).
4. CABLE LENGTHS LONGER THAN 1000 MILLIMETERS ARE NOT SUPPORTED BY S.I. TEST DATA.
5. DIM "A", "B", AND "C" HAVE A MINIMUM VALUE OF 0.0mm & A MAXIMUM VALUE OF 9.9mm[.39"].
6. FOR STRIPPED AND TINNED OPTION, BOTH THE CENTER CONDUCTOR & SHIELD ARE TINNED.
7. USE 3 DIGITS XXX (MILLIMETERS) FOR PHASE MATCHING OPTION. 999MM MAX LENGTH

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MATERIAL: DO NOT SCALE DRAWING  
CENTER CONTACT: -10SP/-10BJ: BeCu SHEET SCALE: 3:2  
OUTER CONTACT: -10SP/-10BJ: STAINLESS STEEL  
INSULATORS: -10SP/-10BJ: PCTFE(EKL-F & ULTEM)



520 PARK EAST BLVD, NEW ALBANY, IN 47150  
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e-Mail info@SAMTEC.com code 55322

DESCRIPTION: LL110 CABLE ASSEMBLY

DWG. NO. LL110-XXXX-XXXXXX-XXXX-X-XX

BY: WILLY Y 3/1/2024 SHEET 1 OF 3

TABLE 2

| END<br>OPTION | SERIES               | GENDER           | FINISH            |                  |                   | CONNECTOR KIT P/N    | FIGURE       |
|---------------|----------------------|------------------|-------------------|------------------|-------------------|----------------------|--------------|
|               |                      |                  | CENTER<br>CONTACT | OUTER<br>CONTACT | SOLDER<br>FERRULE |                      |              |
| -10SP         | 1.0 MM               | PLUG             | 50µ" GOLD         | PASSIVATED       | 10µ" GOLD         | PRF10-P-C-VP-110B-SS | SHT 3, FIG 3 |
| -10BJ         | 1.0 MM               | BULKHEAD<br>JACK | 50µ" GOLD         | PASSIVATED       | 10µ" GOLD         | PRF10-J-C-VP-110B-BS | SHT 3, FIG 4 |
| **SING        | SINGLE ENDED         | -                | -                 |                  | -                 | -                    | -            |
| **XXXXXX      | STRIPPED &<br>TINNED | -                | -                 |                  | -                 | -                    | SHT 1, FIG 2 |

\*\*= END 2 OPTION ONLY

\*= NOT RELEASED

TABLE 3

| END<br>OPTION | MAXIMUM<br>VSWR<br>(PER END) | MAXIMUM<br>RETURN LOSS<br>(PER END) | MAXIMUM INSERTION LOSS<br>(IL) (PER END) | FREQUENCY     | PROTECTIVE<br>CAP COLOR |
|---------------|------------------------------|-------------------------------------|------------------------------------------|---------------|-------------------------|
| -10SP         | 1.183:1                      | 21.53dB                             | 0.03+0.045*SQRT(Freq[Ghz])               | DC TO 90 GHz  | WHITE                   |
|               | 1.225:1                      | 19.90dB                             |                                          | 90 TO 110 GHz |                         |
| -10BJ         | 1.183:1                      | 21.53dB                             | 0.03+0.045*SQRT(Freq[Ghz])               | DC TO 90 GHz  | WHITE                   |
|               | 1.225:1                      | 19.90dB                             |                                          | 90 TO 110 GHz |                         |

IL Max [dB] for Cable Assembly :

$$= \{31.4 * \text{SQRT}(\text{Freq}[\text{GHz}]) + 0.59 * \text{Freq}[\text{GHz}] + 0.0000001 * \text{Freq}[\text{GHz}]^4\} * \text{OAL}[\text{mm}] / 30480 + \text{End Option IL\#1}\{\text{See Table 3}\} \\ + \text{End Option IL\#2}\{\text{See Table 3}\}$$

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SHEET SCALE: 3:2  
 DO NOT SCALE DRAWING

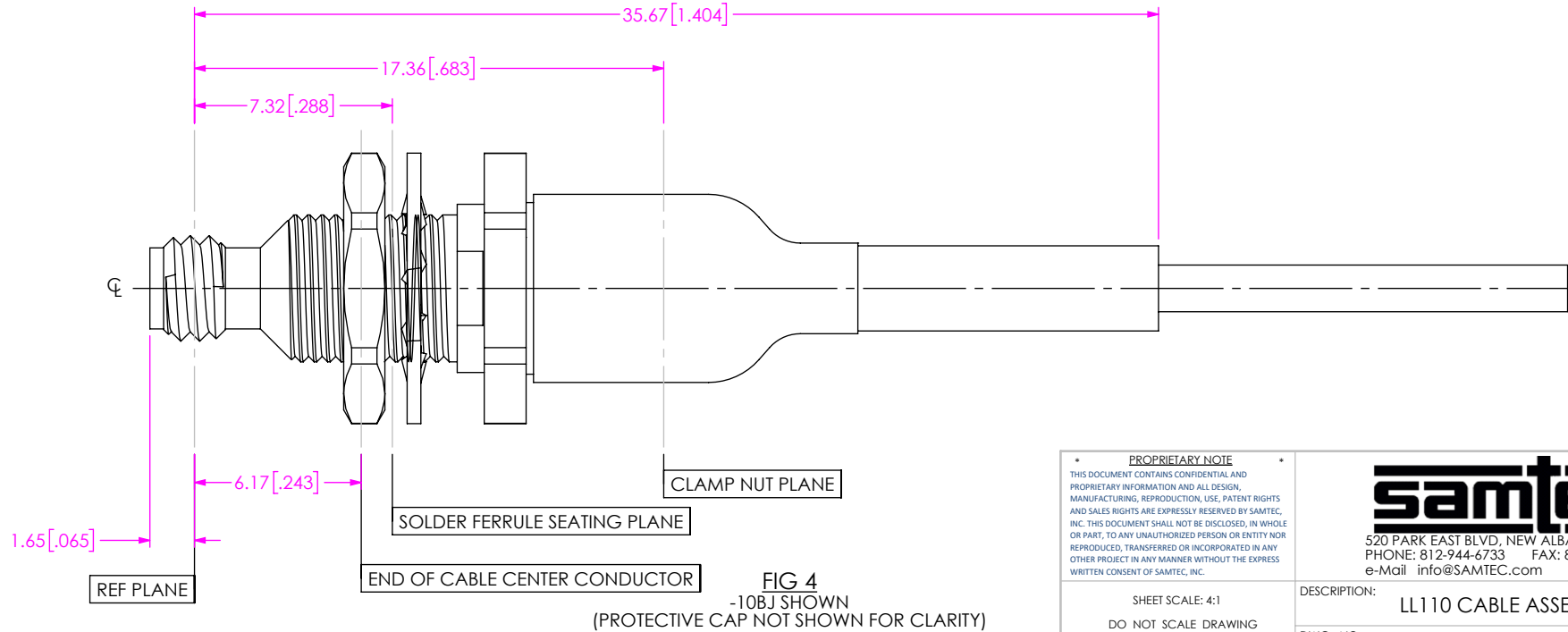
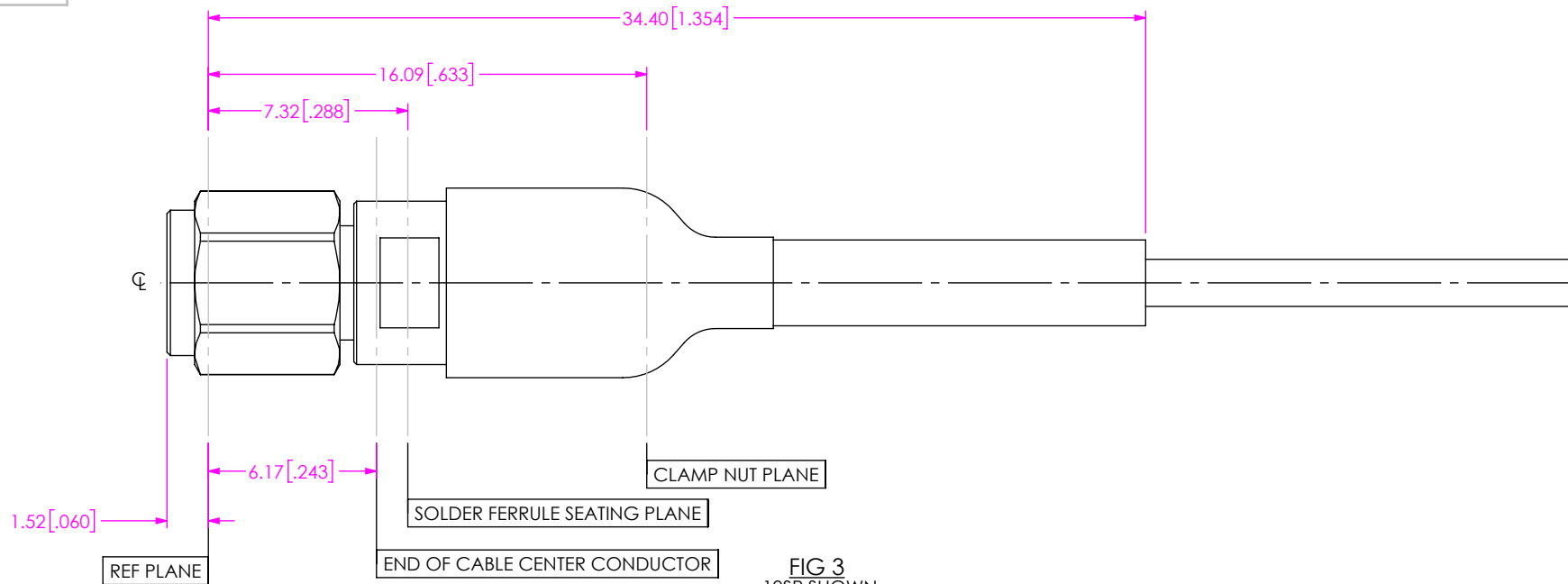
**samtec**

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DESCRIPTION: LL110 CABLE ASSEMBLY

DWG. NO.  
 LL110-XXXX-XXXXXX-XXXX-X-XX

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SHEET SCALE: 4:1  
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