

RF AMPLIFIER

MODEL WN3105

Available as: WN3105, 10 Pin 0.625" Sq. Gullwing (SG4)
 BX3105, SMA Connectorized Housing (H1L)

Features

- High Output Power: +28 dBm Typical
- High Third Order I.P: +44 dBm Typical
- Operating Temp. - 55 °C to +85 °C

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +81 dBm (Typ.)
 Second Order Two Tone Intercept Point +75 dBm (Typ.)
 Third Order Two Tone Intercept Point +44 dBm (Typ.)

Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency (MHz) | 0.5 - 300 MHz | 0.5 - 200 MHz |
| Gain (dB) | 12.0 | 10.0 Min. |
| Power @ 1 dB Comp. (dBm) | 28.0 | 27.0 Min. |
| Gain Flatness (dB) | <±0.5 | ±0.7 Max. |
| VSWR In | <1.5:1 | 1.9:1 Max. |
| VSWR Out | <1.5:1 | 1.9:1 Max. |
| Noise Figure (dB) | 4.5 | 5.7 Max. |
| Power Vdc | +15 | +15 |
| mA | 235 | 260 Max. |

Absolute Maximum (No Damage) Ratings

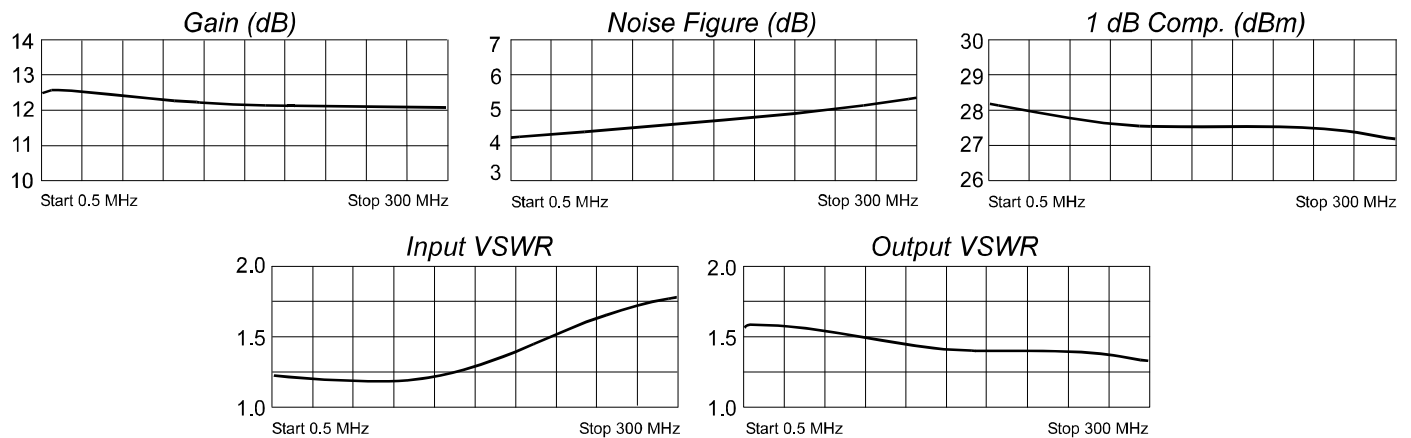
Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +17 Volts
 Continuous RF Input Power +17 dBm
 Short Term RF Input Power..... 200 Milliwatts (1 Minute Max.)
 Maximum Peak Power..... 0.5 Watt (3 µsec Max.)

Revision: 3/8/2016

ECN: Max Input Power Reduced From +20 dBm to +17 dBm

* Measured in a 50-Ohm system at +15 Vdc unless otherwise specified.

Typical Performance Data



Legend ——— +25 °C



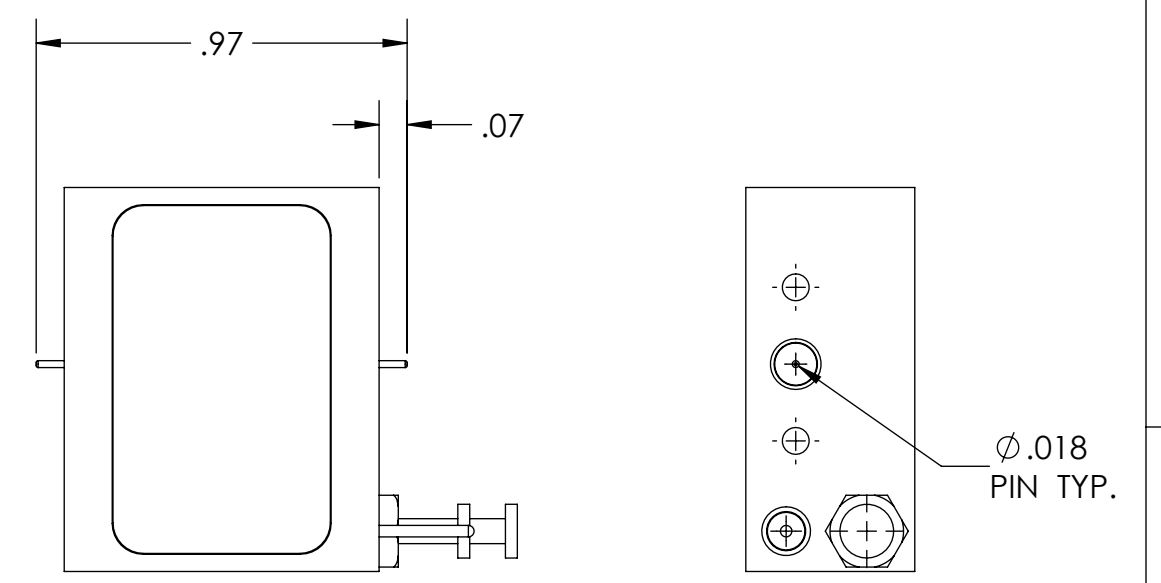
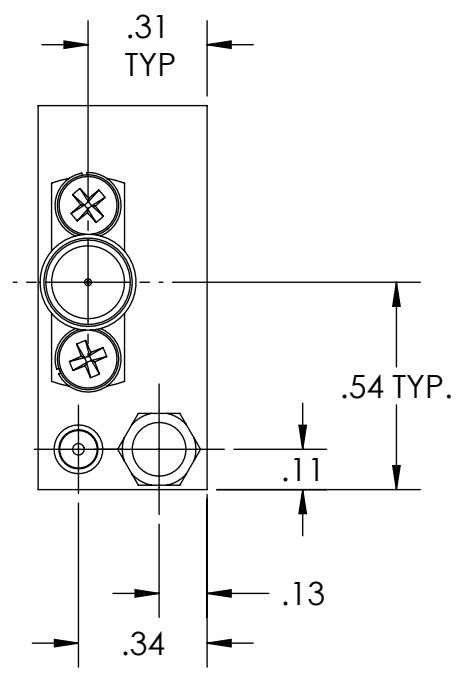
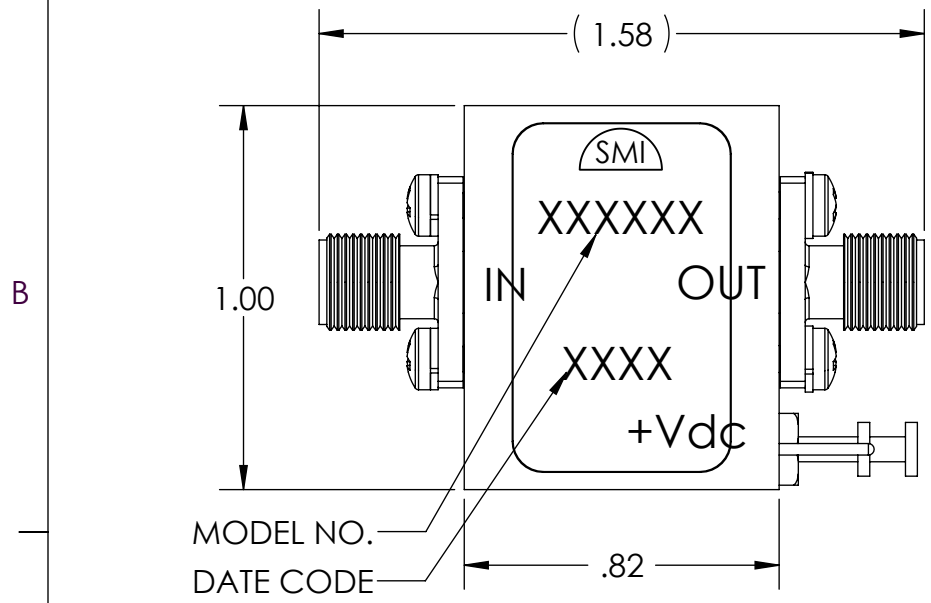
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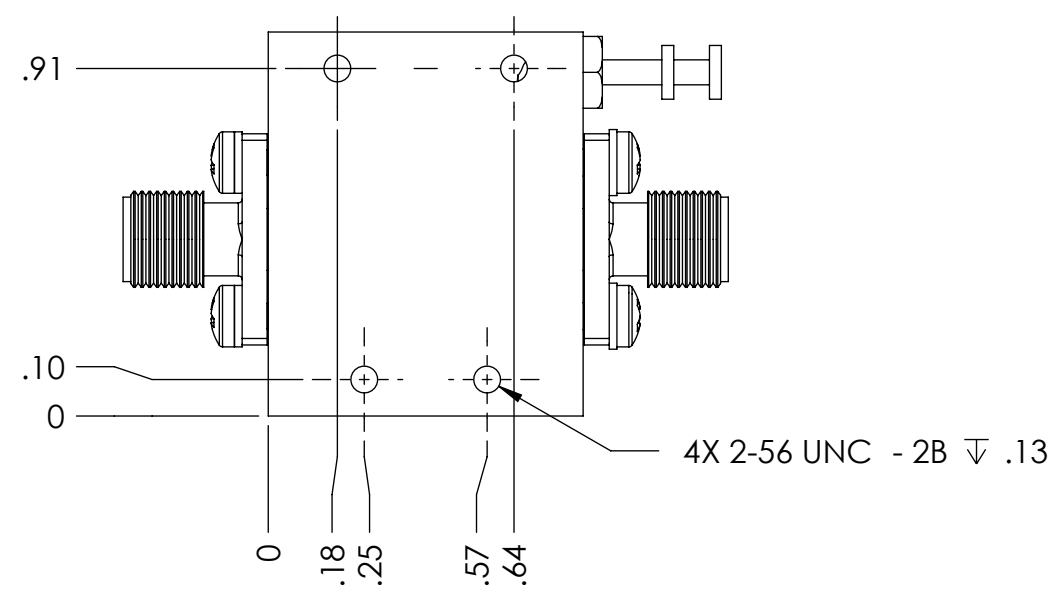
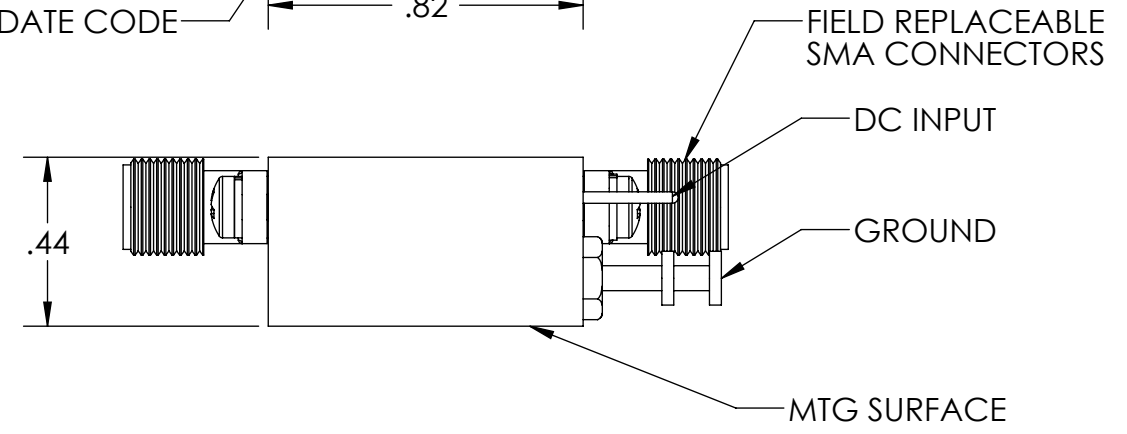
NOTES:

1. HOUSING: 70/30 CN/NI ELECTRONIC GRADE

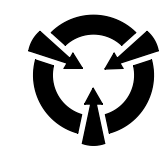
| REVISIONS | | | | |
|-----------|------|---------------------|------------|------------|
| ECN | REV. | DESCRIPTION | CHNG/DATE | APPVD/DATE |
| XXXX | P1 | PRELIMINARY RELEASE | 2013/06/24 | - |



WITHOUT SMA CONNECTORS



CAUTION

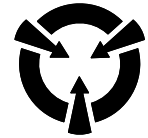


THIS ASSEMBLY CONTAINS PARTS SENSITIVE TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD). USE ESD PRECAUTIONARY PROCEDURES WHEN TOUCHING, REMOVING OR INSERTING

SEE SEPARATE PARTS LIST IN ELECTRONIC STORAGE

| | | | | | | |
|--|----------------------|--|---|--------------------------------|----------------------------------|-----------------------------------|
| <p>UNLESS OTHERWISE SPECIFIED</p> <p>* INTERPRET DRAWING IAW ASME Y14.100-2004</p> <p>* DIMENSIONING AND TOLERANCING IAW ASME Y14.5-1994</p> <p>* PARENTHETICAL INFORMATION FOR REFERENCE ONLY</p> <p>* DIMENSIONAL LIMITS APPLY BEFORE PROCESSES</p> <p>* DIMENSIONS ARE IN INCHES</p> <p>* TOLERANCES ARE: ANGLES ±1.0°</p> <p>* SURFACE FINISH: 63 / 2 PLACE DECIMAL ±.02</p> <p>* REMOVE ALL BURRS AND SHARP EDGES .010 RAD MAX.</p> <p>* CONCENTRICITY MACHINED DIA: .002 FIM</p> <p>* MACHINED TOOL MISMATCH: .002 MAX.</p> | 3rd ANGLE PROJECTION | | <p>SPECTRUM MICROWAVE, INC</p> <p>2707 Black Lake Place</p> <p>Philadelphia, PA 19154-1008 (USA)</p> | | | |
| | ANSI | | | | | <p>DRAWN: WAR</p> <p>CHECKED:</p> |
| | ENGRG: PH | | <p>DATE: 2013/06/24</p> | <p>OUTLINE, H1L</p> | | |
| | MFG: | | <p>QA:</p> | | | |
| <p>SPECTRUM MICROWAVE PROPRIETARY INFORMATION</p> <p>THIS DOCUMENT IS THE SOLE PROPERTY OF SPECTRUM MICROWAVE, INC. THE RELEASE OF DATA CONTAINED IN THIS DOCUMENT AND THE REPRODUCTION OF THIS DOCUMENT, IN WHOLE OR IN PART, WITHOUT THE WRITTEN PERMISSION OF SPECTRUM MICROWAVE, INC ARE PROHIBITED.</p> | | | <p>SIZE: B</p> <p>SCALE: 2:1</p> | <p>CAGE CODE: 60979</p> | <p>DWG NO.: 088-00386</p> | <p>REV: P1</p> |
| <p>DO NOT SCALE DRAWING</p> | | | <p>SHEET: 1 OF 1</p> | | | |

| REVISIONS | | | | |
|-----------|------|---------------------|------------|------------|
| ECN | REV. | DESCRIPTION | CHNG/DATE | APPVD/DATE |
| -- | P1 | PRELIMINARY RELEASE | 2012/05/14 | |

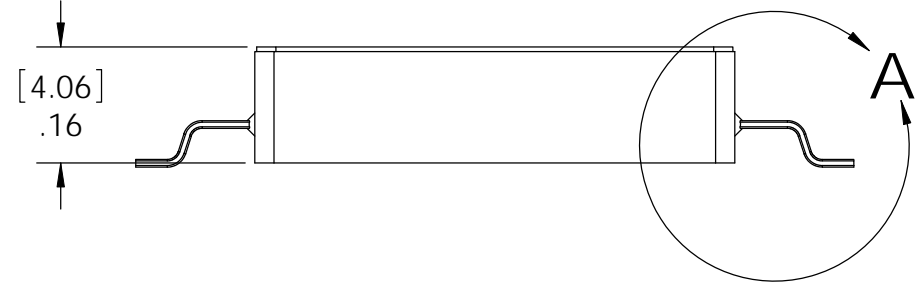
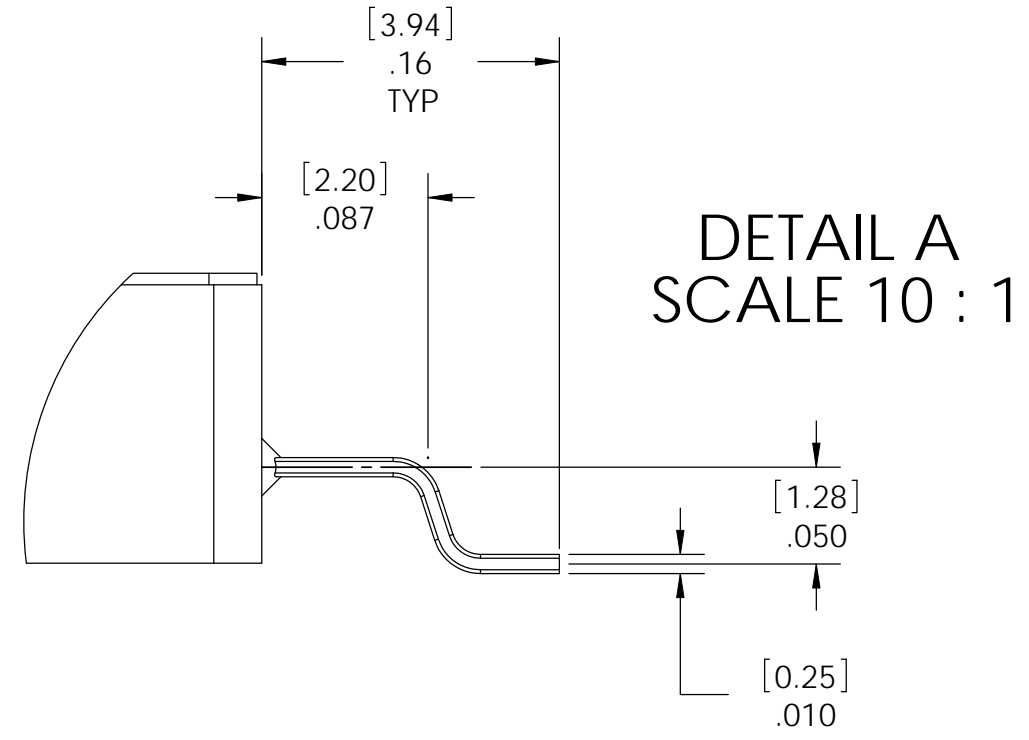
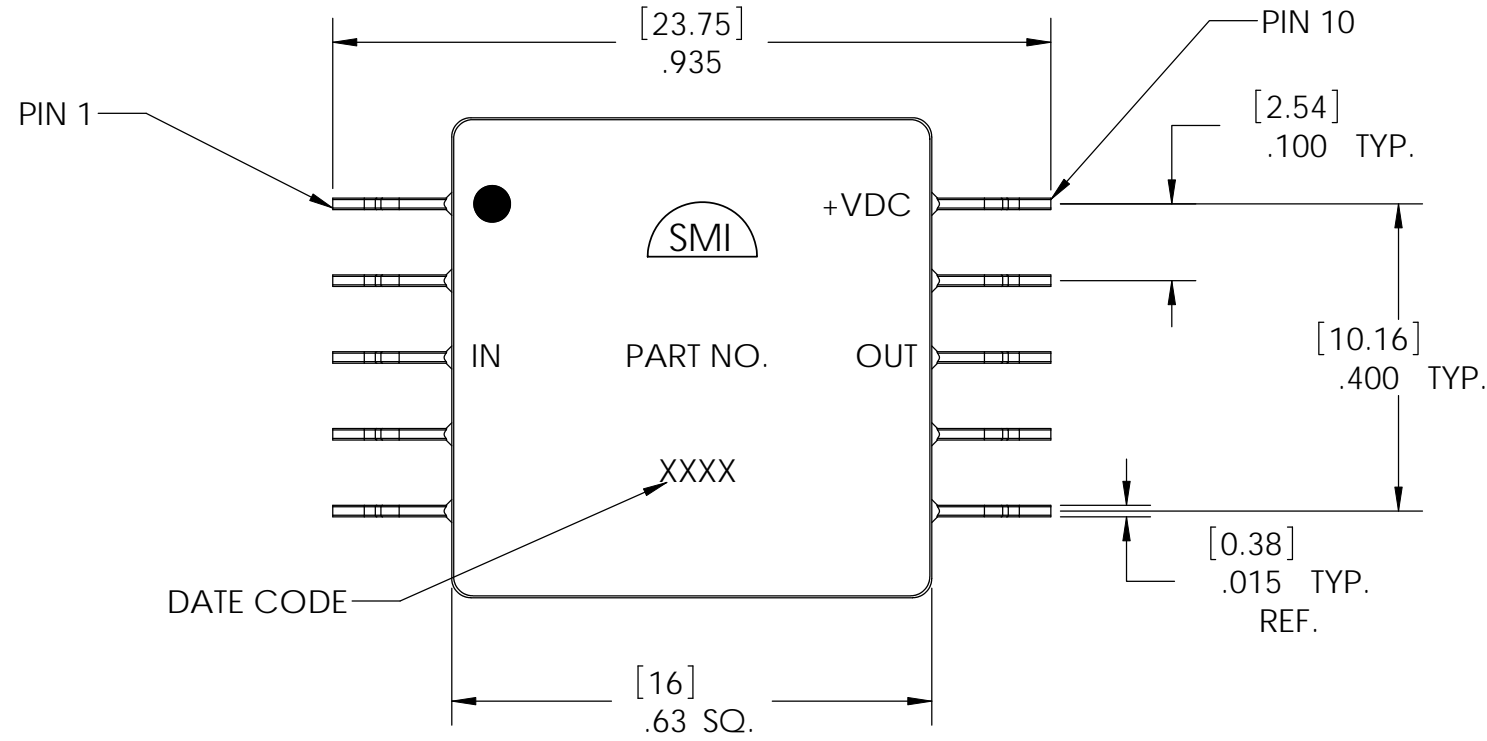


CAUTION

THIS ASSEMBLY CONTAINS PARTS SENSITIVE TO DAMAGE BY ELECTROSTATIC DISCHARGE (ESD). USE ESD PRECAUTIONARY PROCEDURES WHEN TOUCHING, REMOVING OR INSERTING

- NOTES:
- MATERIAL: KOVAR
 - FINISH: NICKEL/GOLD

| PIN TABLE | |
|-----------|--------|
| PIN 3 | RF IN |
| PIN 8 | RF OUT |
| PIN 10 | DC |
| ALL OTHER | GROUND |
| CASE | GROUND |



SEE SEPARATE PARTS LIST IN ELECTRONIC STORAGE

| | | | | | |
|--|--|----------------------|--------------------|--|------------------|
| UNLESS OTHERWISE SPECIFIED | | 3rd ANGLE PROJECTION | | SPECTRUM MICROWAVE, INC 2707 Black Lake Place Philadelphia, PA 19154-1008 (USA) | |
| * INTERPRET DRAWING IAW ASME Y14.100-2004 * DIMENSIONING AND TOLERANCING IAW ASME Y14.5-1994 * PARENTHEICAL INFORMATION FOR REFERENCE ONLY * DIMENSIONAL LIMITS APPLY BEFORE PROCESSES * DIMENSIONS ARE IN INCHES * TOLERANCES ARE: ANGLES ±1.0° * SURFACE FINISH: 63 * REMOVE ALL BURRS AND SHARP EDGES .010 RAD MAX. * CONCENTRICITY MACHINED DIA: .002 FIM * MACHINED TOOL MISMATCH: .002 MAX. | | DRAWN WAR | DATE 2012/05/14 | TITLE | |
| | | CHECKED | | OUTLINE DRAWING SG-4 | |
| | | ENGRG PH | 2012/05/14 | SIZE | |
| | | MFG | | CAGE CODE | 60979 |
| | | QA | | DWG NO. | 088-00305 |
| DO NOT SCALE DRAWING | | SCALE: | 4:1 | SHEET | 1 OF 1 |
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