Specification Sheet
Planar Power Combiner
Model: C2U-6G18-NHNH
6.0 – 18.0 GHz

Summary

The C2U-6G18-NHNH is a high-power planar power combiner, most often used for final power combining in high power broadband amplifiers, but also in some cases as a high-power unisolated power divider. Material selection and sizing is optimized to maximize the useable power range of the high-temperature N-type output connector at minimal cost and loss, for this band. Variants available in SMA or TNC connectors.

For any questions regarding power ratings, inquiries for higher power or other special variants, please contact applications@distributed-elements.com.

Electrical Specifications:

Configuration: 2x N-type input / 1x N-type output
Impedance: 50 ohm in / 50 ohm out
Frequency: 6.0 – 18.0 GHz, See Table 1
CW Power @ STP: 360 W @ 18 GHz, See Table 2
Peak Power @ STP: 1040 W
Insertion Loss: max ≤ 0.5 dB ./ typ. ≤ 0.4 dB
Return Loss: min. ≥ 15 dB
Port mag. balance: max ≤ ±0.1 dB / typ. ≤ ±0.05 dB
Port phase balance: max ≤ ±3.0° / typ. ≤ ±0.7°

Mechanical and Environmental Specifications:

Maximum Continuous Operating Temperature: -55 to +155°C
Storage Temperature Range: -55 to +155°C
Corrosive Environments: Contact Distributed Elements
Size: See drawing
Weight: 0.23 lb.

Material Specifications:

Includes the following metals, by weight fraction:

- Al Alloy 6061-T6 w/Hexavalent-Chromium-Free Conversion Coating: 35%
- Stainless Steel, Passivated: 61%
- BeCu Alloy C14300 w/Au plating: 1%
- Copper Immersion Ag plating: 0.005%

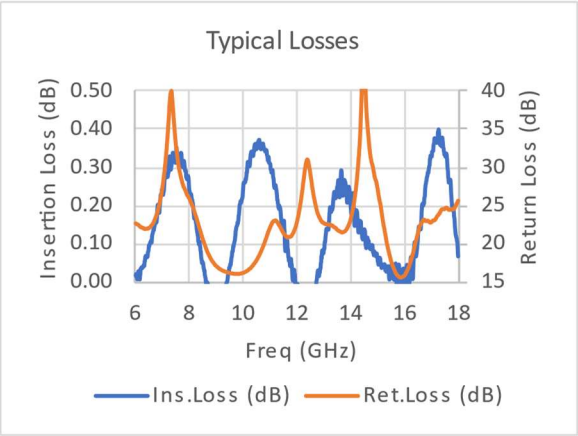


Table 1: Return & Insertion Losses

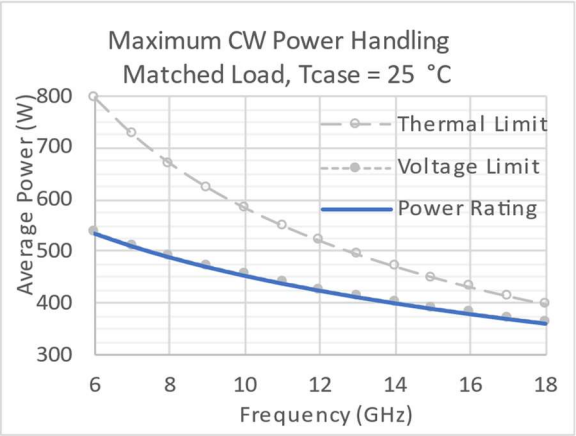


Table 2: Power Rating @ STP

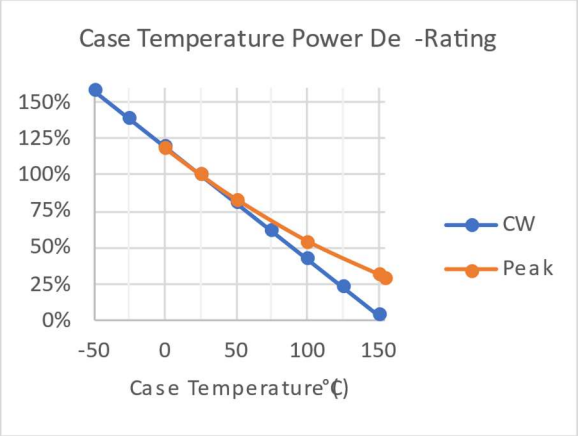


Table 3: Power Derating for Mounting Temp.

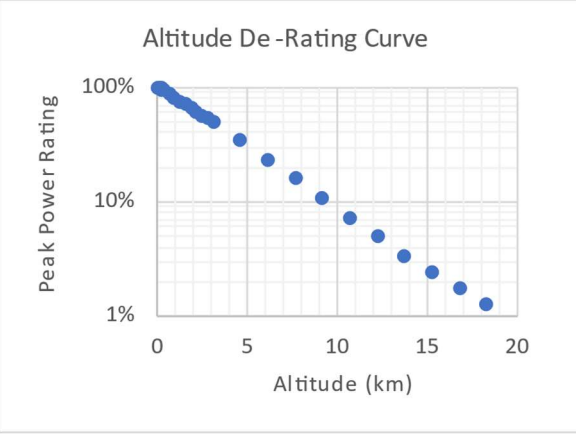


Table 4: Power Derating for Altitude

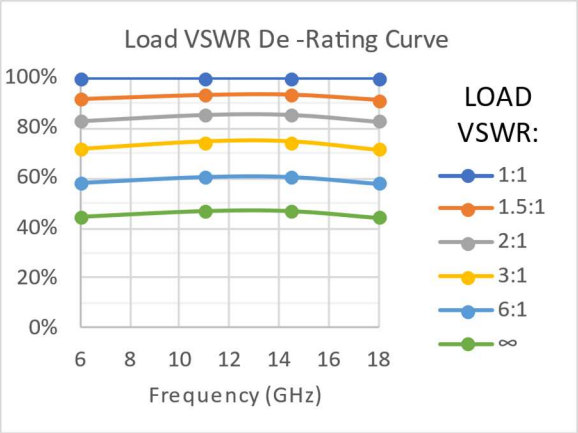


Table 5: Power Derating for Load VSWR

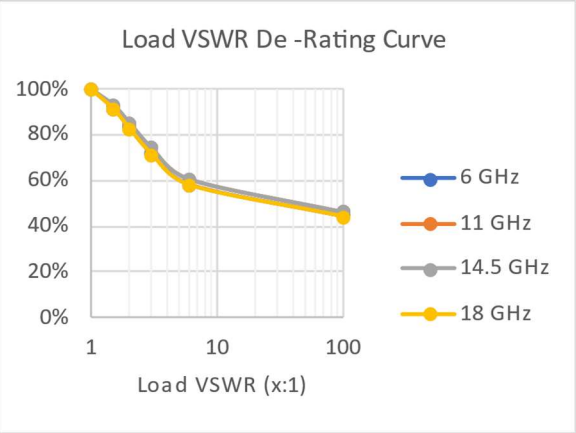
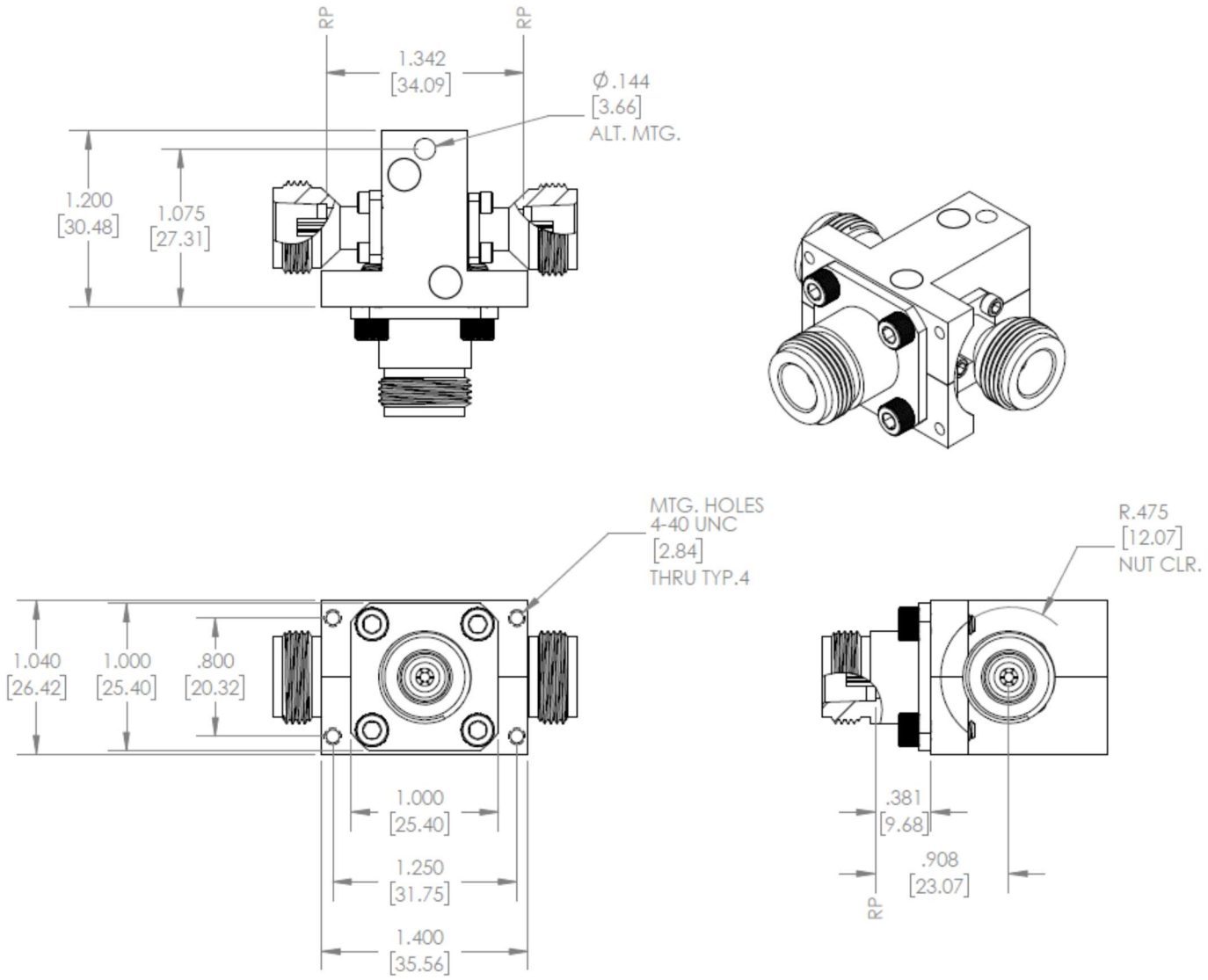


Table 6: Power Derating for Load VSWR (alt.)



All Dimensions in inches [mm]. Case temperature at any mounting hole. Best thermal performance with mounting at 4x 4-40 UNC.

Contact Distributed Elements for exceptions or variances.