



Specification Sheet
Radial Power Combiner
Model: C3U-2.7G3.8-N7
Item: 100687

Summary

The C3U-2.7G3.8-N7 is a high-power very low-loss 3-way radial 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 has been based on achieving lowest loss with very high peak and average power ratings, to within the maximum rating of the selected connector types.

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

Electrical Specifications:

Configuration: 3x Type-N(f) input / 1x DIN 7-16(f) output

Impedance: 50 ohm in / 50 ohm out

Input match achieved by simultaneous drive

Frequency: 2.7 – 3.8 GHz

CW Power @ 25°C/1-atm: 9540 W

(Not to exceed mating connector rating)

Peak Power @ 25°C/1-atm: 50.5 kW

Insertion Loss: max < 0.25 dB ./ typ. < 0.13 dB

Output Return Loss: min. > 17 dB / typ. > 20 dB

Phase balance: max < $\pm 2^\circ$ / typ < $\pm 0.8^\circ$

Magnitude balance: max < ± 0.2 dB / typ. < ± 0.1 dB

Mechanical and Environmental Specifications:

Maximum Continuous Operating Temperature: -55 to +120°C

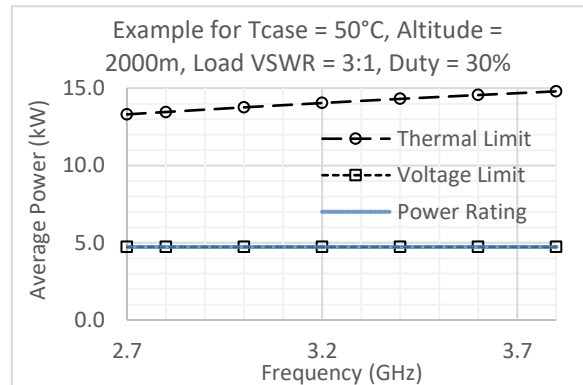
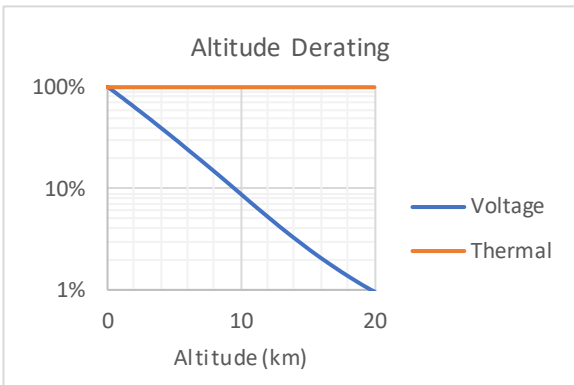
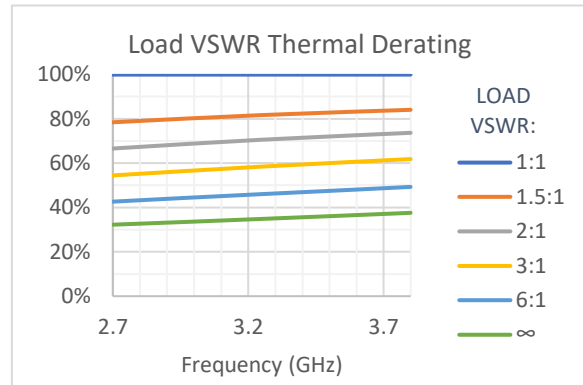
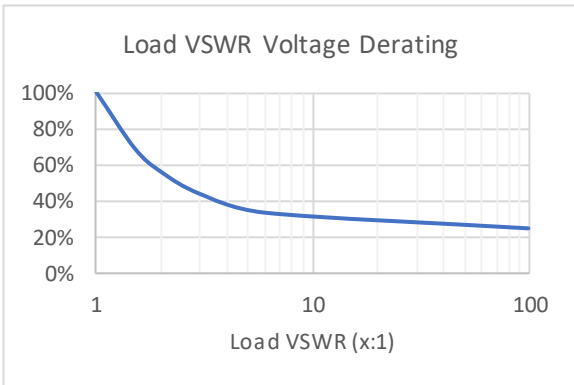
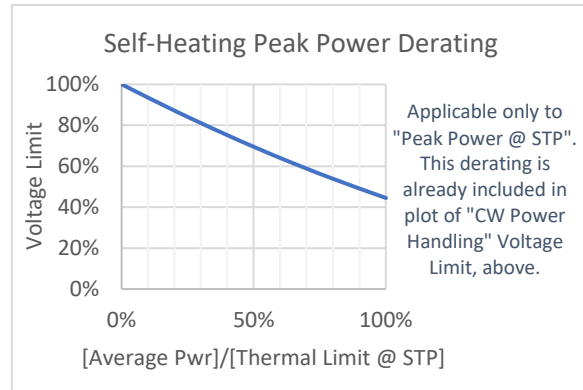
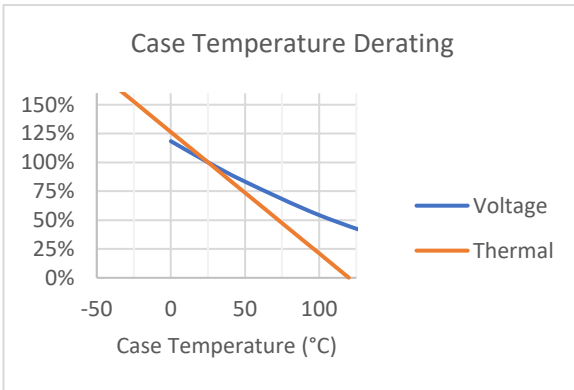
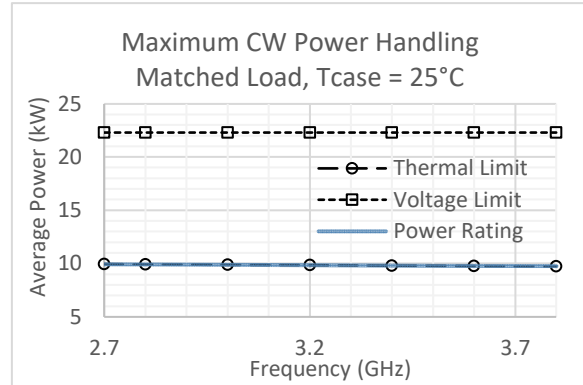
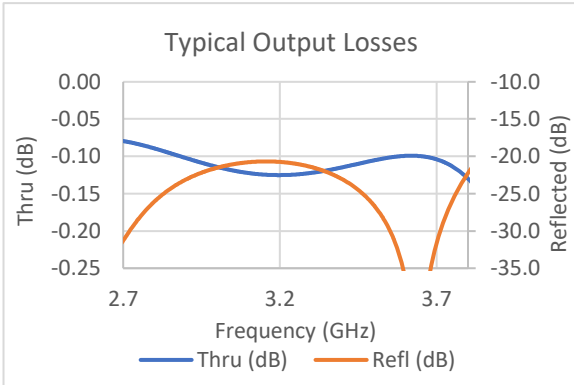
Storage Temperature Range: -55 to +120°C

Corrosive Environments: Contact Distributed Elements

Size: R1.10 x 3.18 in (R2.78 x 8.07 cm) at connector ref. planes

Weight: 0.8 lb. (0.4 kg)





NOTES:

1. ALL DIMENSION IN INCHES.
2. DATUMS "RP" DENOTE CONNECTOR REFERENCE PLANES.
3. ALL THREADED HOLE CALL OUTS ARE VALID CUSTOMER MOUNTING OPTIONS.
4. ALL RATINGS AND DERATINGS ARE WITH RESPECT TO MAXIMUM TEMPERATURE AT THERMAL REFERENCE PLANE DENOTED BY DATUM "TR" IN DRAWING.
5. PRODUCT TYPICALLY REQUIRES MOUNTING TO CHASSIS OR OTHER HEAT SINK TO MAINTAIN TEMPERATURE AND RATINGS.
6. CONTACT DISTRIBUTED ELEMENTS LTD. FOR POTENTIAL THERMAL EXCEPTIONS OR VARIANCES.

