Fusing on FEE Modules

- All supplies on all cards are polyfused.
  - +/- 6V Analog: I_{Hold} = 1.1A, I_{Trip} = 2.2A (RUE110).
  - +5V Digital: I_{Hold} = 5A, I_{Trip} = 8.5A (RGE500).
- Power sent into cards on AMP 96-pin connectors (535043-5, rated UL 94V-0).
  - Pins rated at 1.4A at 40 °C, after derating for parallel power input.
  - I_{Trip} from module fusing determines the connector-pin current-carrying requirements.

Voltage	I_{Trip} Slot	I_{Hold} Slot	# Pins (1.4A ea.)
+/- 6V Analog	2.2A	1.1A	2
Analog Ground	2.2A	1.1A	2
+5V Digital	8.5A	5A	11
Digital Ground	8.5A	5A	27

Associated Data Sheets

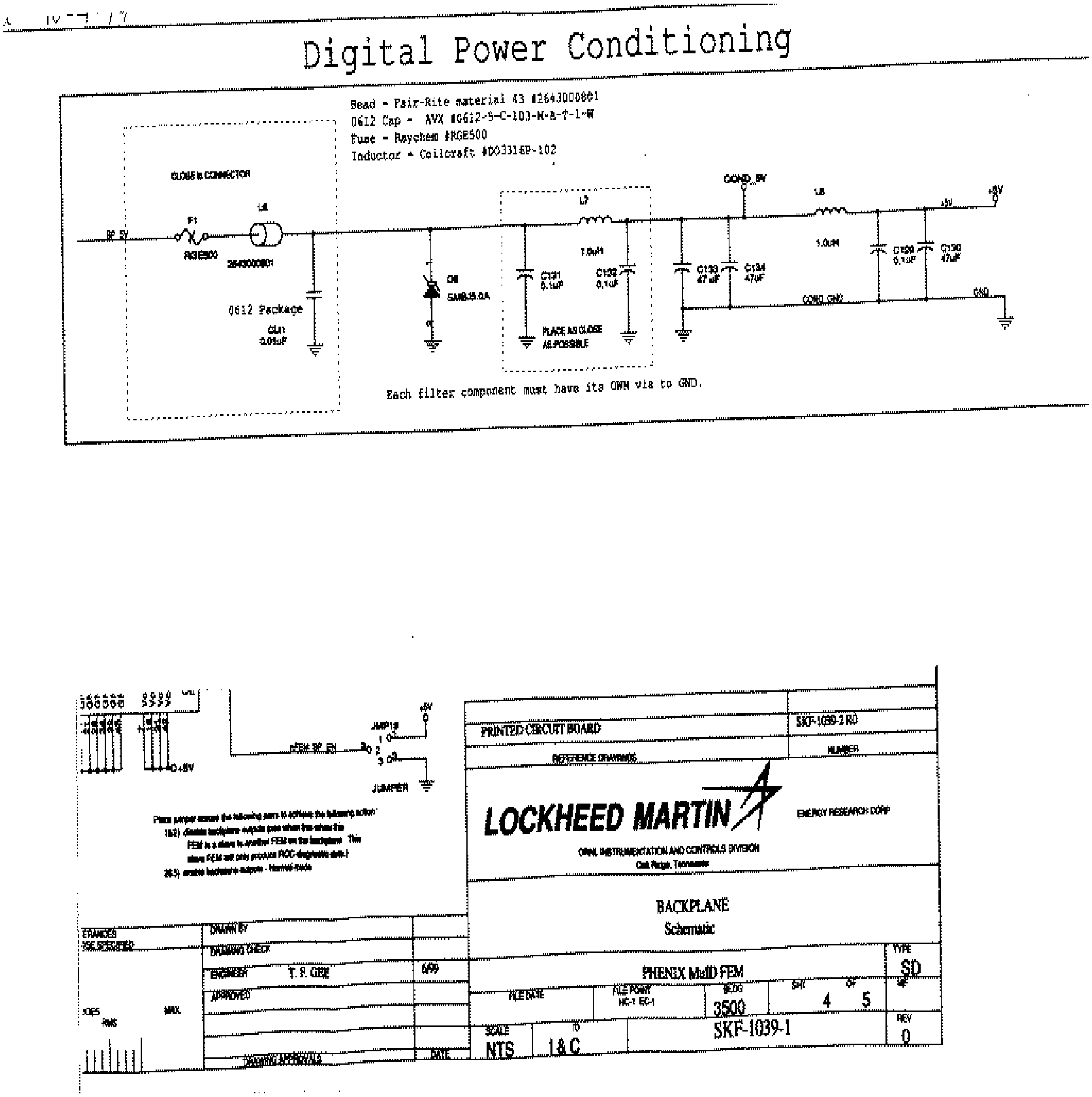

Figure 7.1: FEM power distribution schematic.

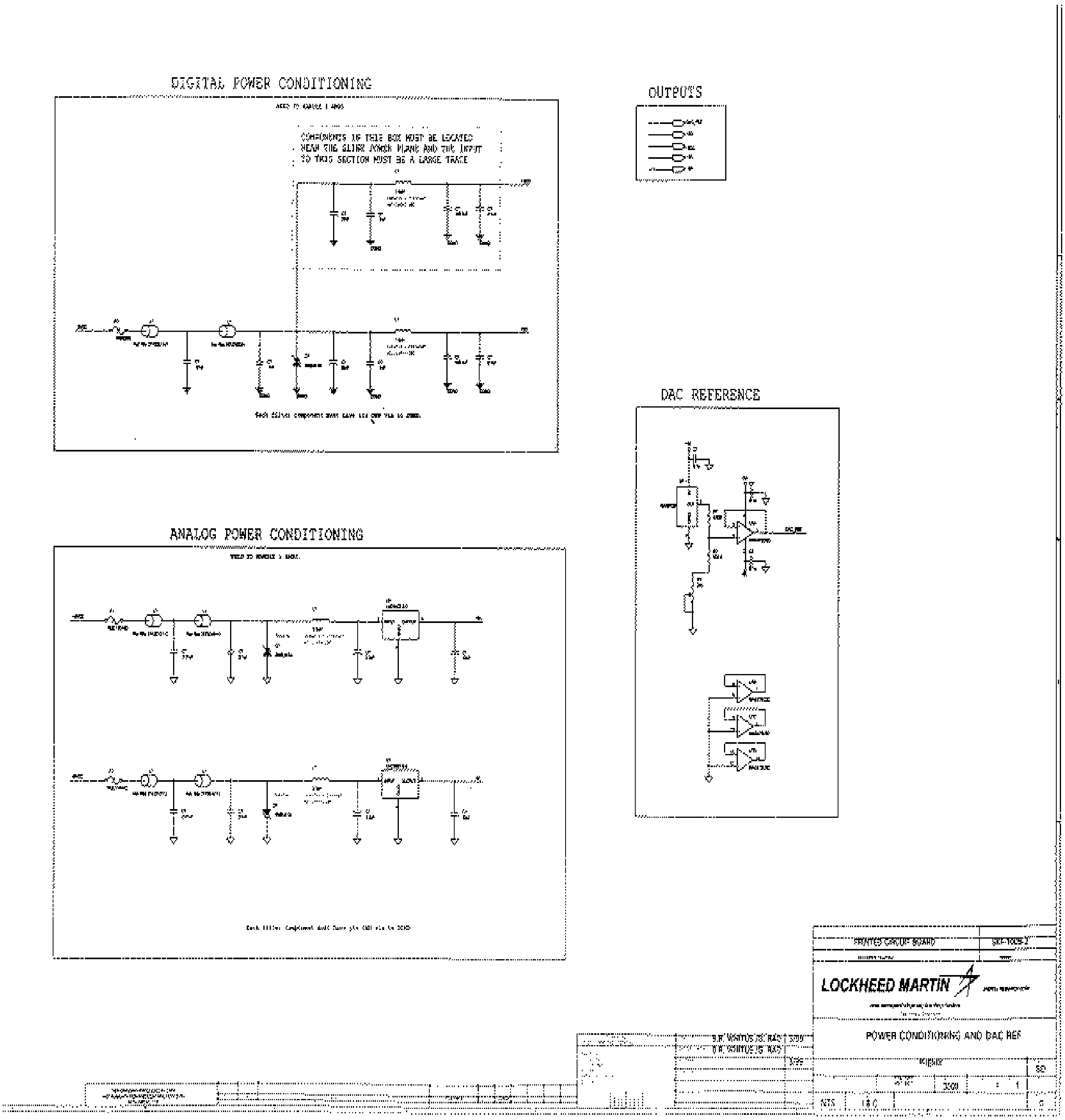
DIGITAL POWER CONDITIONING
TO THIS SECTION MUST BE A LARGE TRACE
OUTPUTS
DAC REFERENCE
ANALOG POWER CONDITIONING
PRINTED CIRCUIT BOARD
LOCKHEED MARTIN
POWER CONDITIONING AND DAC REF

Figure 7.2: ROC power distribution schematic.

RGE
Radial Leaded

RGE Product Data

Now that you have selected your RGE device, please review the device's characteristics in this section to verify that the device will perform as required.

Electrical characteristics (25°C)

Part Number	I_H (A)	I_T (A)	Max. time to trip (s) at $5 \times I_H$	P_d (W)	Initial resistance R min. (Ω)	Post-trip resistance R_1 max. (Ω)
RGE300	3.0	5.1	2.0	2.3	0.034	0.105
RGE400	4.0	6.8	3.5	2.4	0.020	0.063
RGE500	5.0	8.5	3.8	2.8	0.014	0.044
RGE600	6.0	10.2	5.8	2.8	0.009	0.030
RGE700	7.0	11.9	8.0	3.0	0.006	0.021
RGE800	8.0	13.6	9.0	3.0	0.005	0.016
RGE900	9.0	15.3	12.0	3.3	0.004	0.015
RGE1000	10.0	17.0	12.5	3.3	0.003	0.012
RGE1100	11.0	18.7	13.5*	3.7	0.003	0.010
RGE1200	12.0	20.4	16.0	4.2	0.002	0.009
RGE1400	14.0	23.8	20.0	4.6	0.002	0.008

I_H = Hold current—maximum current at which the device will not trip at 25°C.
I_T = Trip current—minimum current at which the device will always trip at 25°C.
P_d = Typical power dissipation—typical amount of power dissipated by the device when in tripped state in 25°C still air.
R min. = Minimum device resistance at 25°C prior to tripping.
R max. = Maximum device resistance at 25°C prior to tripping.
R_1 max. = Maximum device resistance at 25°C measured 1 hour post trip.

* Device tested at 40 A.

Physical characteristics

Lead material	RGE300—RGE1100: Tin lead-plated copper, 20 AWG, Ø 0.81 mm/0.032 in
	RGE1200—RGE1400: Tin lead-plated copper, 18 AWG, Ø 1.0 mm/0.04 in
Soldering characteristics	Solderability per ANSI/J-STD-002
	Solder heat withstand per IEC 68-2-20: RGE300, Test Ta; should be soldered to the printed circuit in less than 4 seconds at maximum temperature of 260°C ± 5°. RGE500—RGE1400, Test Tb; can withstand 10 seconds at 260°C ±5°.
Insulating material	Cured, flame-retardant epoxy polymer; meets UL 94V-0 requirements
	Note: Devices are not designed to be placed through a reflow process.

Agency recognitions

CSA	File # CA 78165C
TÜV	Certificate # R9977540
UL	File # E74889

134 RGE Devices Raychem Circuit Protection Devices

Figure 7.3: RGE-series polyfuse data sheet.

RUE
Radial Leaded

RUE Product Data

Now that you have selected your RUE device, please review the device's characteristics in this section to verify that the device will perform as required.

Electrical characteristics (20°C)

Part Number	I_H (A)	I_T (A)	Max. time to trip (s) at 5x I_H	P_d (W)	Initial resistance R min. (Ω)	Initial resistance R max. (Ω)	Post-trip resistance R1 max. (Ω)
RUE090	0.90	1.80	5.9	0.6	0.070	0.12	0.22
RUE110	1.10	2.20	6.6	0.7	0.050	0.10	0.17
RUE135	1.35	2.70	7.3	0.8	0.040	0.08	0.13
RUE160	1.60	3.20	8.0	0.9	0.030	0.07	0.11
RUE185	1.85	3.70	8.7	1.0	0.030	0.06	0.09
RUE250	2.50	5.00	10.3	1.2	0.020	0.04	0.07
RUE300	3.00	6.00	10.8	2.0	0.020	0.05	0.08
RUE400	4.00	8.00	12.7	2.5	0.010	0.03	0.05
RUE500	5.00	10.00	14.5	3.0	0.010	0.03	0.05
RUE600	6.00	12.00	16.0	3.5	0.005	0.02	0.04
RUE700	7.00	14.00	17.5	3.8	0.005	0.02	0.03
RUE800	8.00	16.00	18.8	4.0	0.005	0.02	0.02
RUE900	9.00	18.00	20.0*	4.2	0.005	0.01	0.02

I_H = Hold current—maximum current at which the device will not trip at 20°C.
I_T = Trip current—minimum current at which the device will always trip at 20°C.
P_d = Typical power dissipation—typical amount of power dissipated by the device when in tripped state in 20°C still air.
R min. = Minimum device resistance at 20°C prior to tripping.
R max. = Maximum device resistance at 20°C prior to tripping.
R_1 max. = Maximum device resistance at 20°C measured 1 hour post trip.

* Device tested at 40 A.

Physical characteristics

Lead material	RUE090–250: Tin lead-plated copper-clad steel, 24 AWG, Ø 0.51 mm/0.020 in
	RUE300–900: Tin lead-plated copper, 20 AWG, Ø 0.81 mm/0.032 in
Soldering characteristics	Solderability per MIL-STD-202, Method 208E
	Solder heat withstand per MIL-STD-202, Method 210, Condition B
Insulating material	Cured, flame-retardant epoxy polymer; meets UL 94V-0 requirements
	Note: Devices are not designed to be placed through a reflow process.

4

1-46 RUE Devices

Raychem Circuit Protection Devices

Figure 7.4: RUE-series polyfuse data sheet.

Products

- Part Number Search

Go

- Alphabetical Search
- Product Type Search
- Product Family Search
- Picture Search
- Interest View
- Competitor Cross Reference
- Document Number Search
- Help/Glossary

.100 & .200 Centerline DIN 41612 Connectors (Eurocard) Eurocard Type C and Enhanced Type C Connectors .100 Centerline - 3 Row

535043-5 -- *1 of 1 products* Active

Y2K - OK

Please use the customer drawing for all design activity.

- **Customer Drawing: 535043**, Rev. L
  Document Title: ASSEMBLY, RECEPTACLE, EUROCARD, TYPE C, SOLDER TAIL, 96 POSITION
  199268.pdf (105K)

Line art and other pictures below are general representations of product dimensions, please use the customer drawing for all design activity.

Product Photo Rec. PC Board Hole Pattern

Searchable Features:

Product Type:	Type C Connectors
Sex:	Receptacle
No. of Positions:	96
Rows Loaded:	A, B, C
Terminate To:	Printed Circuit Board
Special PCB Retention:	No
PCB Mount Angle:	Vertical
Post Type:	Solder Post
Post Length (mm [in]):	4.57 [.180]
Size (mm [in]):	Standard
Contact Cross Section (mm [in]):	0.30 x 0.61 [.012 x .024]
Make First / Break Last:	No

Other Properties:

Contact Material:	Phosphor Bronze
Contact Mating Area Plating:	Gold Flash over Palladium Nickel
Solder Tail Plating:	Tin-Lead over Nickel
Housing Material:	Polyester
Color:	Gray
Housing Flammability Rating:	UL 94V-0

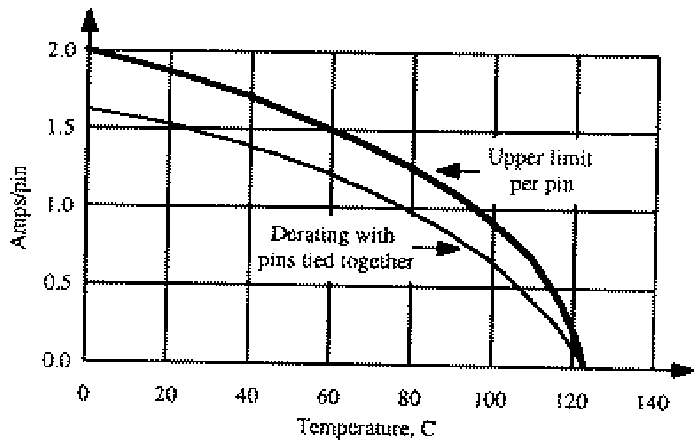

Figure 7.5: Backplane connector data sheet.