

**DESCRIPTION**

AMC MODEL RFNA-811 IS A CUSTOM BUILT 8 TO 11 GHz RF SUB-SYSTEM USED TO PERFORM RF SIGNAL PROCESSING.

**SPECIFICATIONS**

- FREQUENCY:..... 8 TO 11 GHz
- INPUT POWER:
  - AT J1005: .....+10 TO +20 dBm
  - AT J1013: .....-50 TO +20 dBm
  - AT J1006: .....+10 TO +15 dBm
  - AT J1016: .....+8 TO +13 dBm
  - AT J1017: .....-50 TO +20 dBm
  - AT J1011: .....+8 TO +13 dBm
  - AT J1008: .....-60 TO -10 dBm
- OUTPUT POWER:
  - AT J1007: ..... 11.65 dBm
  - AT J1014: .....-50 TO +6.92 dBm
  - AT J1015: .....-50 TO +5 dBm
  - AT J1012: .....-60 TO +13.00 dBm
  - AT J1009: .....-60 TO -0.35 dBm
  - AT J1010: .....-45.35 TO +4.65 dBm
- POWER SUPPLY: .....+5V @ 5.0 A MAXIMUM
  - +15V @ 3.0 A MAXIMUM
  - 15V @ 3.0 A MAXIMUM
  - +28V @ 1.0 A MAXIMUM
- VSWR: ..... 2.0:1 ALL INPUT PORTS
  - 2.5:1 ALL OUTPUT PORTS
- THROUGHPUT DELAY:..... 10nS MAXIMUM ALL PATHS
- SWITCH ON/OFF:..... 50nS MAXIMUM
- ATTENUATOR RISE/FALL:..... 1.6uS/100nS MAXIMUM
- DEPTH OF MODULATION:
  - K1:..... 60dB MINIMUM
  - AT1-AT6, AT8: ..... 50dB MINIMUM
  - AT7:..... 40dB MINIMUM
  - SW1-SW6, SW8:..... 60dB MINIMUM
  - SW7:..... 50dB MINIMUM
- RF CONNECTORS:..... SMA FEMALE

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE:.....-55°C TO +85°C (OPERATING)
  - 65°C TO +125°C (STORAGE)
- HUMIDITY:..... MIL-STD-202F, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202F, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202F, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE  
 NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

- GAINS/LOSS:
  - GAIN J1005 TO J1014:.....3dB MINIMUM  
(AT8 SET TO MINIMUM, SW8 & SW2 SET TO ON)
  - GAIN J1005 TO J1007:.....6dB MINIMUM, 20dB MAXIMUM  
(SW2 SET TO ON)
  - GAIN J1013 TO J1014:.....10dB MINIMUM, 23dB MAXIMUM  
(AT2 SET TO MINIMUM, AT7 AND AT8 SET TO MAXIMUM, SW7 AND SW8 SET TO OFF)
  - GAIN J1013 TO J1014:.....0dB MINIMUM, 13dB MAXIMUM  
(AT2 SET TO MAXIMUM, AT7 AND AT8 SET TO MINIMUM, SW7 AND SW8 SET TO ON)
  - GAIN J1013 TO J1007:.....3dB MINIMUM, 16dB MAXIMUM  
(AT7 SET TO MINIMUM AND SW7 SET TO ON)
  - LOSS J1006 TO J1015:.....10dB MAXIMUM  
(AT1 SET TO MINIMUM, SW1 SET TO ON, AND K1 SET TO ON)
  - GAIN J1006 TO J1012:.....3dB MINIMUM, 20dB MAXIMUM  
(AT1 SET TO MINIMUM, SW1 SET TO ON AND K1 SET TO OFF)
  - GAIN J1016 TO J1012:.....3dB MINIMUM, 20dB MAXIMUM  
(AT6 SET TO MINIMUM AND SW6 SET TO ON)
  - GAIN J1017 TO J1012:.....3dB MINIMUM, 20dB MAXIMUM  
(AT3 SET TO MINIMUM AND SW3 SET TO ON)
  - GAIN J1011 TO J1012:.....3dB MINIMUM, 20dB MAXIMUM  
(AT5 SET TO MINIMUM AND SW5 SET TO ON)
  - GAIN J1008 TO J1009:.....6dB MINIMUM AND 16dB MAXIMUM  
(AT4 SET TO MINIMUM AND SW4 SET TO ON)
  - GAIN J1008 TO J1010:.....9dB MINIMUM, 19dB MAXIMUM

ALL DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 X.XX ±0.020  
 X.XXX ±0.010

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	ORIGINAL RELEASE	5/29/05	

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 ISO 9001:2015 CERTIFIED



APPROVALS		DATE	TITLE		REV.
DRAWN <i>FKM &amp; YR</i>		4/5/06	PRODUCT FEATURE RFNA-811		-
CHECKED			8 - 11 GHz RF SUB-SYSTEM USED TO PERFORM RF SIGNAL PROCESSING		
ISSUED	SIZE A	FSCM NO. 60483	DWG NO. 100-7424		
SCALE N:S			SHEET 1 OF 3		

# DESCRIPTION

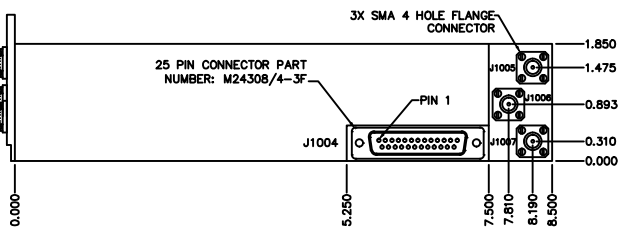
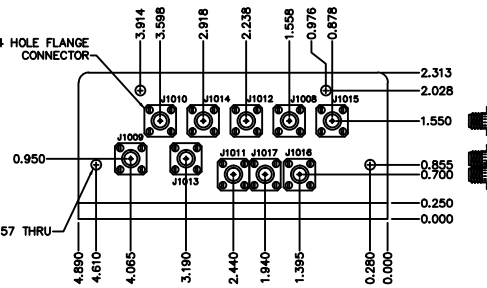
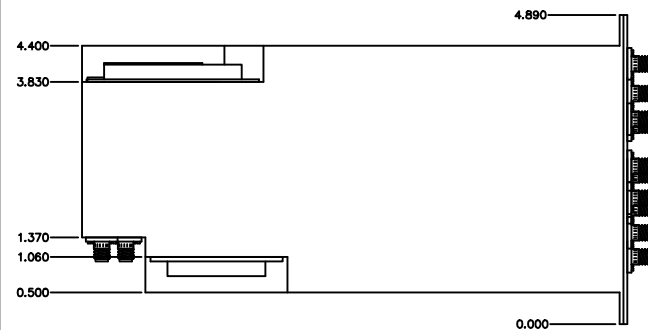
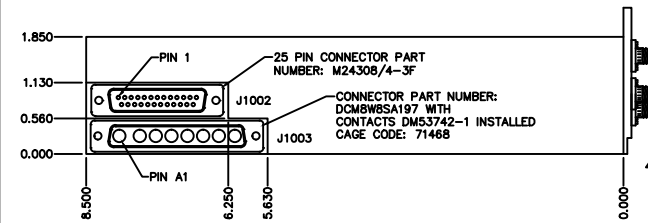
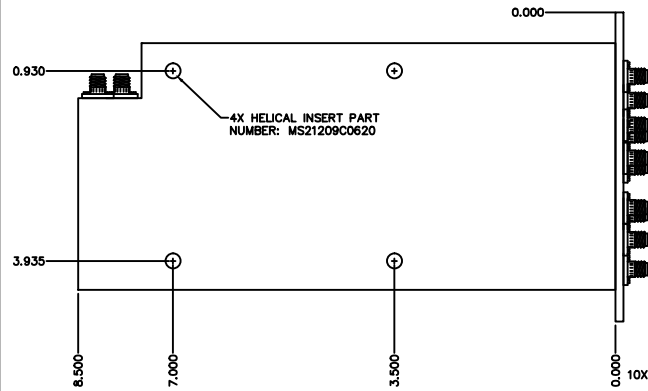
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PINOUT FOR CONNECTOR J1002	
PIN NO.	FUNCTIONAL DESCRIPTION
PIN 1	K1 RELAY CMD
PIN 2	GROUND
PIN 3	GROUND
PIN 4	+5 VDC
PIN 5	+5 VDC
PIN 6	+5 VDC
PIN 7	GROUND
PIN 8	GROUND
PIN 9	GROUND
PIN 10	-15 VDC
PIN 11	-15 VDC
PIN 12	-15 VDC
PIN 13	-15 VDC
PIN 14	-15 VDC
PIN 15	GROUND
PIN 16	+28 VDC
PIN 17	GROUND
PIN 18	+15 VDC
PIN 19	+15 VDC
PIN 20	+15 VDC
PIN 21	+15 VDC
PIN 22	+15 VDC
PIN 23	+15 VDC
PIN 24	GROUND
PIN 25	GROUND

PINOUT FOR CONNECTOR J1004	
PIN NO.	FUNCTIONAL DESCRIPTION (INPUTS 0 - 10 VDC)
PIN 1	REPEATER INPUT ATTENUATOR CONTROL; AT2
PIN 2	SHIELD GROUND FOR SIGNAL AT PIN 1
PIN 3	DRFM INPUT ATTENUATOR CONTROL; AT4
PIN 4	SHIELD GROUND FOR SIGNAL AT PIN 3
PIN 5	DRFM OUTPUT ATTENUATOR CONTROL; AT6
PIN 6	SHIELD GROUND FOR SIGNAL AT PIN 5
PIN 7	IFMSOR ATTENUATOR CONTROL; AT5
PIN 8	SHIELD GROUND FOR SIGNAL AT PIN 7
PIN 9	RGPO ATTENUATOR CONTROL; AT8
PIN 10	SHIELD GROUND FOR SIGNAL AT PIN 9
PIN 11	SPOT NOISE ATTENUATOR CONTROL; AT1
PIN 12	SHIELD GROUND FOR SIGNAL AT PIN 11
PIN 13	REPEATER OUTPUT ATTENUATOR CONTROL; AT3
PIN 14	SHIELD GROUND FOR SIGNAL AT PIN 13
PIN 15	LOOP INPUT ATTENUATOR CONTROL; AT7
PIN 16	SHIELD GROUND FOR SIGNAL AT PIN 15
PIN 17	N/A
PIN 18	N/A
PIN 19	N/A
PIN 20	N/A
PIN 21	N/A
PIN 22	N/A
PIN 23	N/A
PIN 24	N/A
PIN 25	N/A

# MECHANICAL OUTLINE



PINOUT FOR CONNECTOR J1003	
PIN NO.	FUNCTIONAL DESCRIPTION (ALL TTL INPUT)
PIN A1	LOOP INPUT ENABLE SWITCH CONTROL; SW-7
PIN A2	LOOP FILL ENABLE SWITCH CONTROL; SW-2
PIN A3	DELAY LINE RGPO SWITCH CONTROL; SW-8
PIN A4	CHOP AM SWITCH CONTROL; SW-4
PIN A5	IFMSOR AM SWITCH CONTROL; SW-5
PIN A6	DRFM AM SWITCH CONTROL; SW-6
PIN A7	NOISE AM SWITCH CONTROL; SW-1
PIN A8	REPEATER AM SWITCH CONTROL; SW-3

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