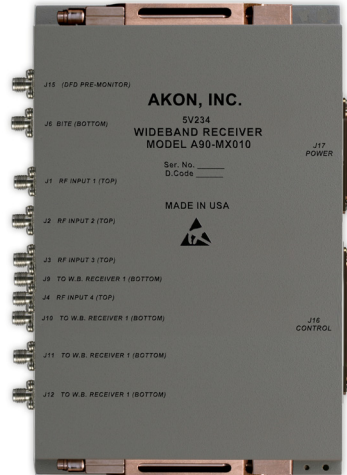


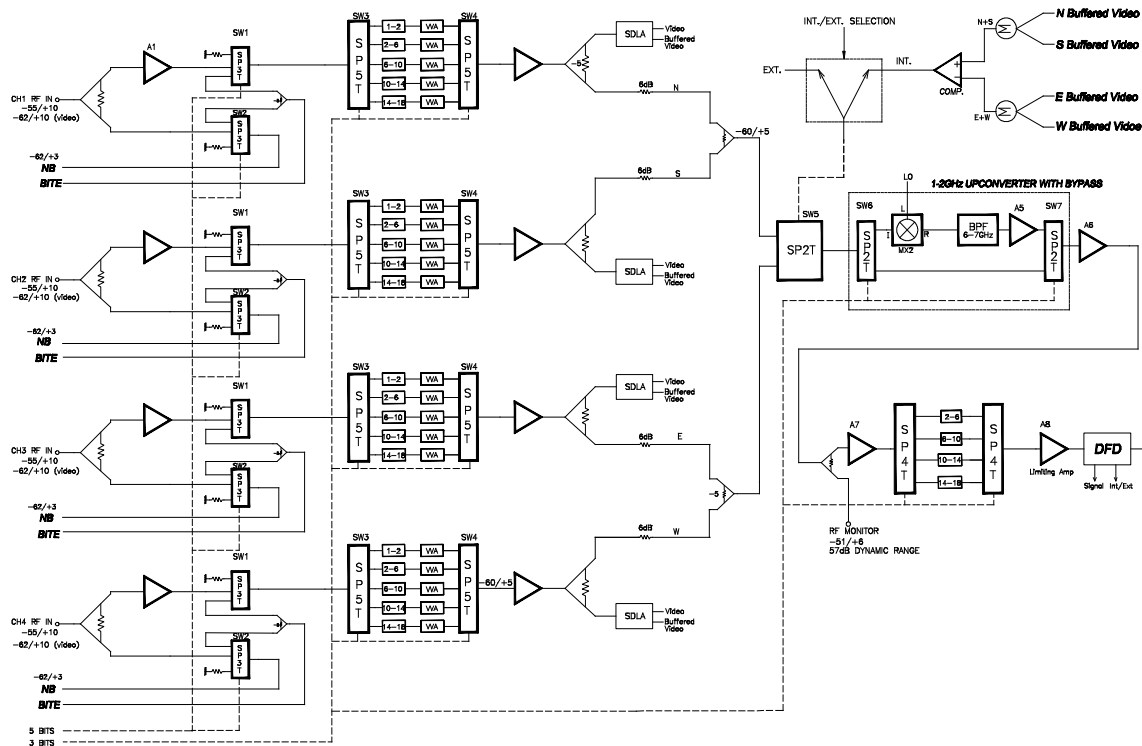
FEATURES:

- TYPE 1 TUNER
- 1 - 18 GHz INPUT FREQUENCY
- 65 dB INPUT DYNAMIC RANGE
- 4 INPUT CHANNELS
- 77.6 WATTS POWER CONSUMPTION
- SIZE: 9.2" x 5.9" x 1.7"
- WEIGHT 3.0 KG



AKON's 1 to 18 GHz Wideband Microwave Tuner A90-MX010 is preceded by a front-end low noise amplifier (limiter - low noise amplifier - 10 meter cable - equalizer - bias tee on both sides of the RF cable). (FEA is separately specified). The net front-end FEA gain is 20 dB with 5 dB maximum (4.0 dB nominal) noise figure and +23 dBm minimum output power. The 10 meter cable with equalizer and bias tee has 8.0 dB loss. Thus the input dynamic range of -65 to 0 dBm is translated to -55 dBm to +10 dBm at the input of the tuner. AKON is qualified to MIL-I-45208 Quality System requirements by agencies of the U.S. D.O.D. and leading military OEMs. Screening to requirements of MIL-STD-883 is available. All specifications described below are over the full operating temperature.

BLOCK DIAGRAM:

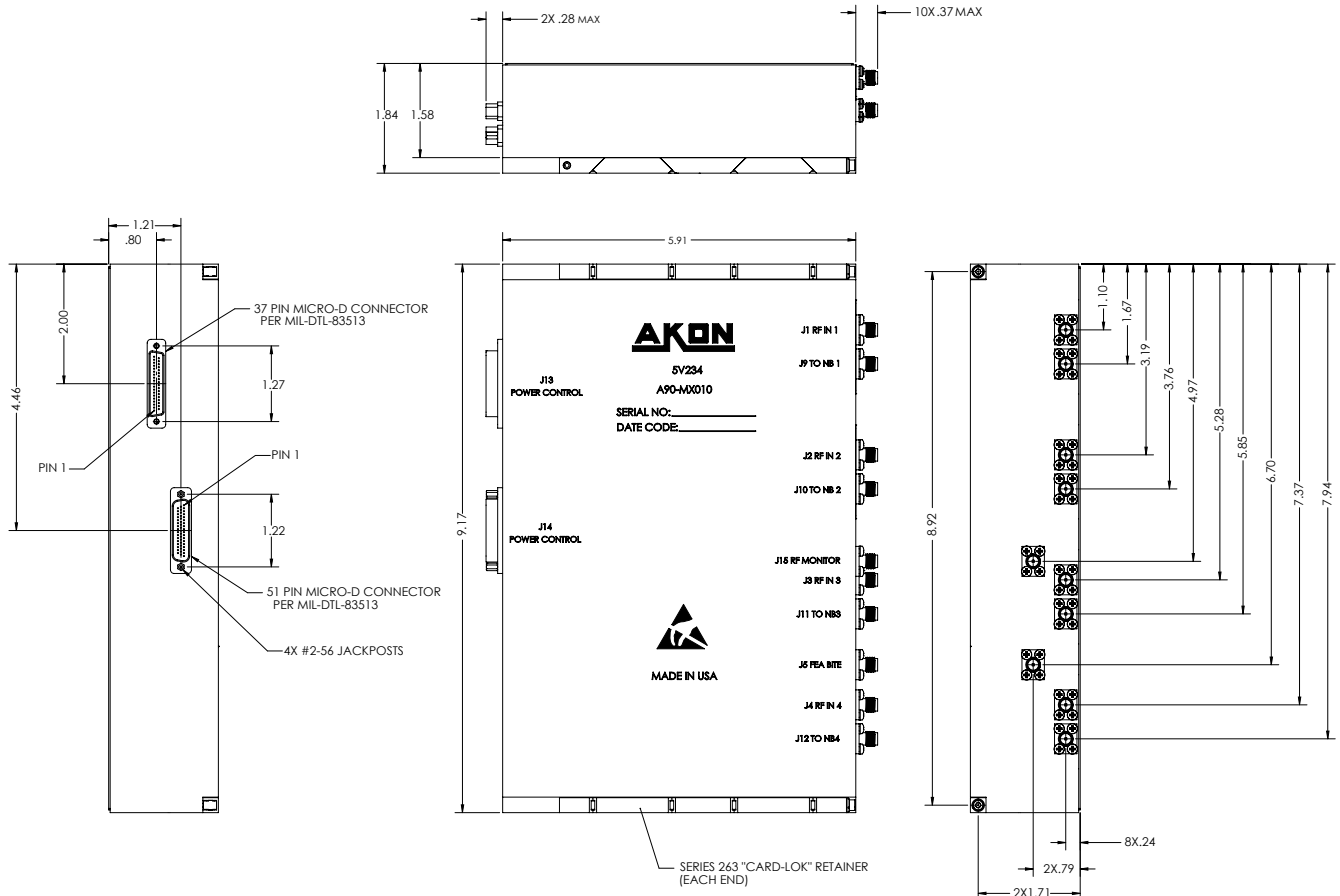


SPECIFICATIONS:

Model Number	A90-MX010
Number of Input Channels	4 Total (J1, J2, J3, J4)
Number of Output Channels	12 Total: 4 - To Narrow Band Receiver; 4 - To Bite Input; 4 - To Vid 1,2,3,4
Output Frequency Data	14 bits + 1 bit (Signal Present)
Output : Monitor Prior to DFD (dBm)	-51 to +6
Isolation (dB)	60 (min); 65 (nom)
Harmonics (dBc)	-8 (min)
Spurious (dBc)	-50 (min)
Input Frequency (GHz)	1 to 18
Processing Bands (GHz)	1 – 2, 2 – 6, 6 – 10, 10 – 14, 14 – 18
Filter Rejection 15% from band edges (dBc)	-65
Input RF Processing Range (dBm)	-53 to +12
Input Equivalent Dynamic Range at FEA Input (dBm)	-65 to 0
T.S.S. @ FEA Input (dBm)	-72 (nom)
Input Log Dynamic Range (@FEA Input)(dBm)	-72 to 0
Log Slope (mV/dB)	25
Absolute accuracy of power measurement (dB)	+/- 2.0 (typ); +/- 3.0 (max)
Channel to Channel isolation (dB)	65
Input V.S.W.R	2.0:1
Log Linearity over frequency and temperature (dB)	+/- 1.5
Pulse Rise Time (10% - 90%) (nS)	25
Pulse Settling Time (nS)	40
Recovery Time (nS)	75
Input Control Bits	Total 7 Bits: 3 Band Select 2 Input SW Control 1 INT/EXT SW Control Select 1 DFD INT/EXT Trigger
Power Supply (VDC)	+12 @1.0A; +8 @ 6.2A; -8 @ 2.0A

Note: All dimensions are specified in inches (mm)

OUTLINE DRAWING:



J14 (POWER/CONTROL)	
PIN	FUNCTION
1	DATA BIT 1-
2	DATA BIT 1+
3	DATA BIT 2-
4	DATA BIT 2+
5	DATA BIT 3-
6	DATA BIT 3+
7	DATA BIT 4-
8	DATA BIT 4+
9	DATA BIT 5-
10	DATA BIT 5+
11	DATA BIT 6-
12	DATA BIT 6+
13	DATA BIT 7-
14	DATA BIT 7+
15	DATA BIT 8-
16	DATA BIT 8+
17	DATA BIT 9-
18	DATA BIT 9+
19	DATA BIT 10-
20	DATA BIT 10+
21	DATA BIT 11-
22	DATA BIT 11+
23	DATA BIT 12-
24	DATA BIT 12+
25	DATA BIT 13-
26	DATA BIT 13+

J14 (POWER/CONTROL CONT'D)	
PIN	FUNCTION
27	DATA BIT 14-
28	DATA BIT 14+
29	CLK IN -
30	CLK IN +
31	BAD DATA -
32	BAD DATA +
33	+8VC
34	+8VD
35	-8VB
36	+8VC RETURN
37	+8VD RETURN
38	-8VB RETURN
39	SPARE
40	SPARE
41	SPARE
42	SPARE
43	SPARE
44	SPARE
45	SPARE
46	SPARE
47	SPARE
48	SPARE
49	SPARE
50	SPARE
51	SPARE

J13 (POWER/CONTROL)	
PIN	FUNCTION
1	A0, RF BAND SELECT
2	A1, RF BAND SELECT
3	A2, RF BAND SELECT
4	B0, BITE BAND SELECT
5	B1, BITE BAND SELECT
6	B2, BITE BAND SELECT
7	BIT 1, RF/BITE SELECT
8	BIT 2, CH1 SHUTDOWN
9	BIT 3, CH2 SHUTDOWN
10	BIT 4, CH3 SHUTDOWN
11	BIT 5, CH4 SHUTDOWN
12	MASS CONTROL 1, INT/EXT
13	MASS CONTROL 2, NS/EW
14	ATTENUATION
15	MODULATION
16	BITE INT/EXT
17	DIGITAL GND 1
18	DIGITAL GND 2
19	+12VA
20	+12VB
21	+8VA
22	+8VB
23	-8VA
24	+12VA RETURN
25	+12VB RETURN
26	+8VA RETURN

J13 (POWER/CONTROL CONT'D)	
PIN	FUNCTION
27	+8VB RETURN
28	-8VA RETURN
29	VIDEO OUT, CH1
30	VIDEO OUT, CH1 RETURN
31	VIDEO OUT, CH2
32	VIDEO OUT, CH2 RETURN
33	VIDEO OUT CH3
34	VIDEO OUT, CH3 RETURN
35	VIDEO OUT CH4
36	VIDEO OUT, CH4 RETURN
37	SPARE