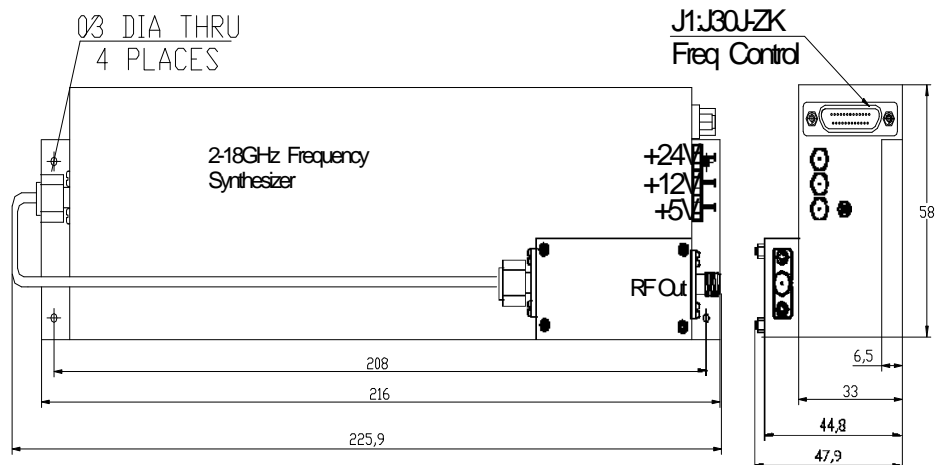


## Technical Specification

Frequency Range(GHz)	2-18
SSB Phase Noise(dBc)	-82 @ 1KHz -85 @ 10KHz -90 @ 1MHz -120 @ 10MHz
Tuning Step Size( MHz)	10
Power Level(dBm)	+13 (min)
Power Variation (Freq. & Temp.)( dB)	±3
Harmonics(dBc)	-10
Spurious(dBc)	-60
Switching Speed( uS)	100
Output Impedance(ohm)	50
Temperature Stability	±1X10 <sup>-7</sup> (-40~+60°C)
Aging	±5X10 <sup>-7</sup> (MAX)
Tuning Format (Freq. Control)	3.3V-TTL 12Bits parallel
Phase Lock Indicator	3.3V-TTL High LOCK LOW UNLOCK
Power Supply(V/A)	+12/1.3 +5/1.5 +24/0.2 (MAX)
Warm-Up Surge Current( mA)	500
Operational Case Temperature(°C)	+50
Humidity	10-90%
Altitude(Km)	10
Weight(g)	1500
Dimensions	See outline drawing

## Outline Drawing (Size: mm)





**Test Results**

+25 °C

Frequency (GHz)	Level (dBm)	Phase Noise (dBc/Hz)				Spurious (dBc) Max	Harmonics (dBc)	Power Supply (V/mA)
		-82 @1KHz	-85 @10KHz	-90 @1MHz	-120 @10MHz			
<b>2-18</b>	<b>+10</b>					<b>-60</b>	<b>-15</b>	
2	+22	-104	-106	-116	-128	-60	-15	+12V/600mA +5V/970mA +24V/180mA
3	+21	-102	-105	-115	-129	-60	-17	+12V/600mA +5V/970mA +24V/180mA
4	+23	-102	-103	-113	-132	-60	-23	+12V/600mA +5V/970mA +24V/180mA
5	+22	-100	-102	-112	-131	-60	-18	+12V/600mA +5V/970mA +24V/180mA
6	+22	-101	-102	-113	-130	-60	-16	+12V/600mA +5V/970mA +24V/180mA
7	+23	-91	-93	-115	-131	-60	-26	+12V/600mA +5V/970mA +24V/180mA
8	+21	-94	-95	-101	-126	-60	-27	+12V/600mA +5V/970mA +24V/180mA
9	+22	-96	-95	-102	-126	-60	-28	+12V/600mA +5V/970mA +24V/180mA
10	+20	-94	-96	-103	-124	-60	-29	+12V/600mA +5V/970mA +24V/180mA
11	+20	-88	-89	-110	-125	-60	/	+12V/600mA +5V/970mA +24V/180mA
12	+21	-87	-89	-102	-126	-60	/	+12V/600mA +5V/970mA +24V/180mA
13	+21	-87	-89	-102	-123	-60	/	+12V/600mA +5V/970mA +24V/180mA



**MFS20180-A**  
**2-18GHz Frequency Synthesizer**

14	+18	-87	-88	-103	-124	-60	/	+12V/600mA +5V/970mA +24V/180mA
15	+21	-86	-88	-102	-121	-60	/	+12V/600mA +5V/970mA +24V/180mA
16	+20	-87	-89	-103	-120	-60	/	+12V/600mA +5V/970mA +24V/180mA
17	+19	-84	-86	-104	-122	-60	/	+12V/600mA +5V/970mA +24V/180mA
18	+17	-86	-87	-105	-123	-60	/	+12V/600mA +5V/970mA +24V/180mA

**-40°C**

Frequency (GHz)	Level (dBm)	Phase Noise (dBc/Hz)				Spurious (dBc) Max	Harmonics (dBc)	Power Supply (V/mA)
		<b>-82</b> @1KHz	<b>-85</b> @10KHz	<b>-90</b> @1MHz	<b>-120</b> @10MHz			
<b>2-18</b>	<b>+10</b>					<b>-60</b>	<b>-15</b>	
2	+22	-103	-105	-116	-128	-60	-7	+12V/730mA +5V/910mA +24V/180mA
3	+23	-102	-103	-114	-130	-60	-18	+12V/730mA +5V/910mA +24V/180mA
4	+24	-102	-103	-111	-132	-60	-26	+12V/730mA +5V/910mA +24V/180mA
5	+24	-100	-101	-112	-131	-60	-18	+12V/730mA +5V/910mA +24V/180mA
6	+23	-101	-101	-112	-132	-60	-18	+12V/730mA +5V/910mA +24V/180mA
7	+23	-97	-99	-115	-130	-60	-26	+12V/730mA +5V/910mA +24V/180mA
8	+23	-92	-92	-100	-125	-60	-27	+12V/730mA +5V/910mA +24V/180mA
9	+22	-94	-95	-102	-126	-60	-31	+12V/730mA +5V/910mA



**MFS20180-A**  
**2-18GHz Frequency Synthesizer**

								+24V/180mA
10	+22	-94	-95	-105	-125	-60	-29	+12V/730mA +5V/910mA +24V/180Ma
11	+23	-92	-95	-110	-125	-60	/	+12V/730mA +5V/910mA +24V/180mA
12	+21	-87	-89	-102	-126	-60	/	+12V/730mA +5V/910mA +24V/180mA
13	+20	-87	-89	-102	-124	-60	/	+12V/730mA +5V/910mA +24V/180mA
14	+18	-89	-90	-103	-124	-60	/	+12V/730mA +5V/910mA +24V/180mA
15	+20	-87	-88	-104	-122	-60	/	+12V/730mA +5V/910mA +24V/180mA
16	+20	-87	-90	-103	-122	-60	/	+12V/730mA +5V/910mA +24V/180mA
17	+19	-86	-89	-104	-121	-60	/	+12V/730mA +5V/910mA +24V/180mA
18	+18	-86	-87	-106	-123	-60	/	+12V/730mA +5V/910mA +24V/180mA

**+60 °C**

Frequency (GHz)	Level (dBm)	Phase Noise (dBc/Hz)				Spurious (dBc) Max	Harmonics (dBc)	Power Supply (V/mA)
		-82 @1KHz	-85 @10KHz	-90 @1MHz	-120 @10MHz			
<b>2-18</b>	<b>+10</b>					<b>-60</b>	<b>-15</b>	
2	+21	-100	-102	-115	-127	-60	-15	+12V/840mA +5V/980mA +24V/190mA
3	+22	-99	-100	-114	-130	-60	-17	+12V/840mA +5V/980mA +24V/190mA
4	+21	-98	-99	-109	-131	-60	-23	+12V/840mA +5V/980mA +24V/190mA
5	+22	-97	-98	-107	-131	-60	-20	+12V/840mA



**MFS20180-A**  
**2-18GHz Frequency Synthesizer**

								+5V/980mA +24V/190mA
6	+21	-95	-97	-105	-132	-60	-17	+12V/840mA +5V/980mA +24V/190mA
7	+20	-94	-96	-105	-131	-60	-27	+12V/840mA +5V/980mA +24V/190mA
8	+20	-90	-92	-101	-125	-60	-25	+12V/840mA +5V/980mA +24V/190mA
9	+20	-94	-95	-101	-125	-60	-29	+12V/840mA +5V/980mA +24V/190mA
10	+20	-93	-94	-102	-123	-60	-30	+12V/840mA +5V/980mA +24V/190mA
11	+20	-91	-93	-102	-122	-60	/	+12V/840mA +5V/980mA +24V/190mA
12	+20	-87	-88	-103	-123	-60	/	+12V/840mA +5V/980mA +24V/190mA
13	+19	-87	-89	-102	-122	-60	/	+12V/840mA +5V/980mA +24V/190mA
14	+16	-86	-88	-103	-121	-60	/	+12V/840mA +5V/980mA +24V/190mA
15	+18	-85	-87	-102	-120	-60	/	+12V/840mA +5V/980mA +24V/190mA
16	+16	-85	-87	-103	-121	-60	/	+12V/840mA +5V/980mA +24V/190mA
17	+16	-84	-86	-103	-120	-60	/	+12V/840mA +5V/980mA +24V/190mA
18	+14	-85	-86	-104	-120	-60	/	+12V/840mA +5V/980mA +24V/190mA