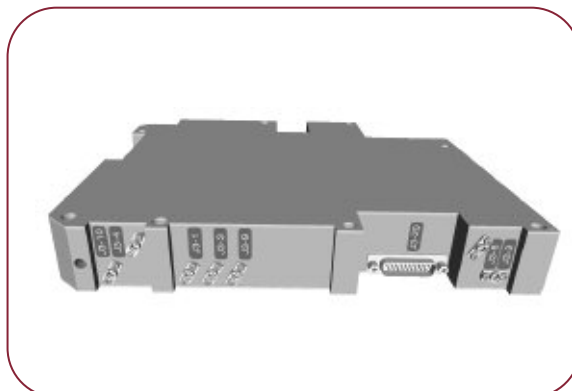


MICROWAVE EXCITER/TRANSMITTER

MODEL: FMUC-1030010700-1018010580

FEATURES

- RF frequency range 10.3–10.7 GHz
- LO 1 frequency 1.54–1.94 GHz
- LO 2 frequency 240 MHz
- Tx output power 30 dBm typical
- LO output power 18 dBm typical
- In/out VSWR 1.8:1 typical
- Tx and LO blanking 70 dB typical
- Phase modulation delay 120 nsec typical
- DC current 3500 mA typical (+12 VDC),
600 mA typical (-12 VDC)
- Powersave mode 700 mA
- Weight 1450 grams typical



MITEQ's Model FMUC-1030010700-1018010580 exciter is an integrated upconverter with modulator/LO generator that shares a common LO input. By combining MITEQ's state-of-the-art components into one housing, we are able to deliver the high-level functions of a rack-mount system into one package. This assembly combines high isolation switches, hybrid amplifiers, mixers, low loss, high rejection bandpass filters with a medium power amplifier to provide a balance of RF performance and layout efficiency.

Both the Tx and LO path feature signal blanking with 70 dB of isolation. To limit bandwidth, the Tx path features a post modulator bandpass filter with low phase variation. A low power bit is supplied directly off of the Tx path. To minimize DC power consumption, this unit comes with a powersave mode. All control signals utilize LVDS.

ELECTRICAL SPECIFICATIONS

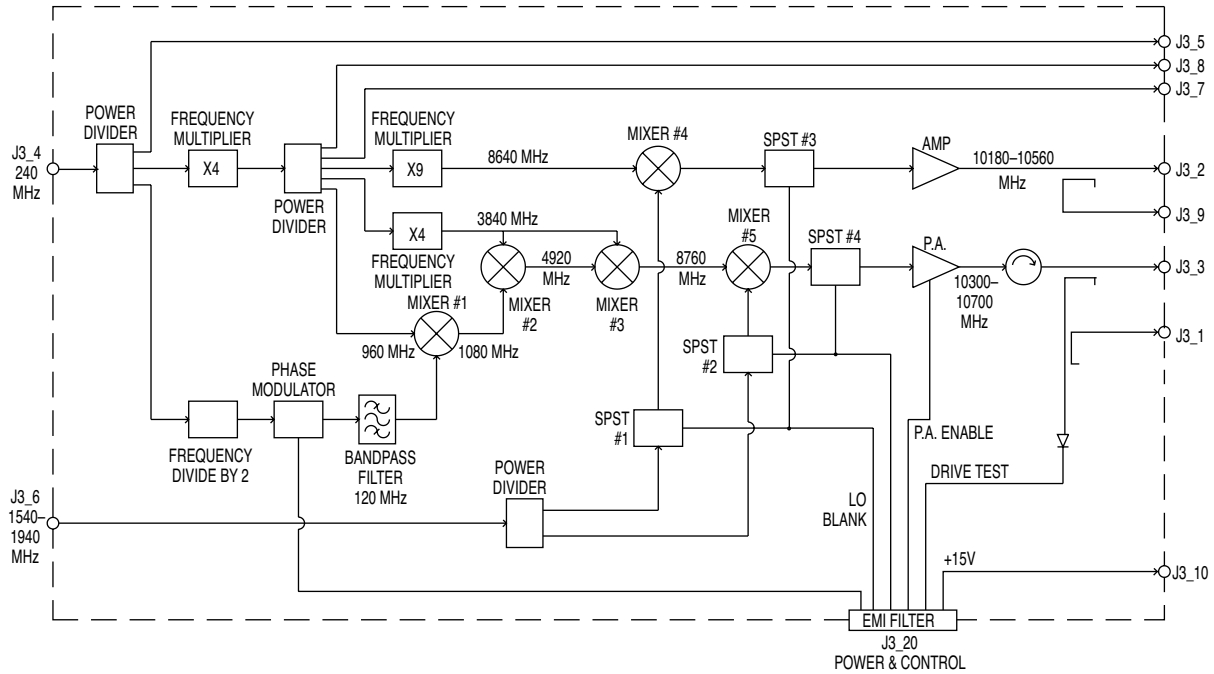
PARAMETERS	UNITS	MIN.	TYP.	MAX.
RF output frequency	GHz	10.3		10.7
LO output frequency	GHz	10.18		10.58
LO 1 input frequency	GHz	1.54		1.94
LO 2 input frequency	GHz		0.24	
Tx output power	dBm		30	
Tx blanking isolation	dB		70	
Bit output power	dBm		-22	
Bit isolation	dB		30	
LO output power	dBm		18	
LO blanking isolation	dB		70	

FMUC-1030010700-1018010580

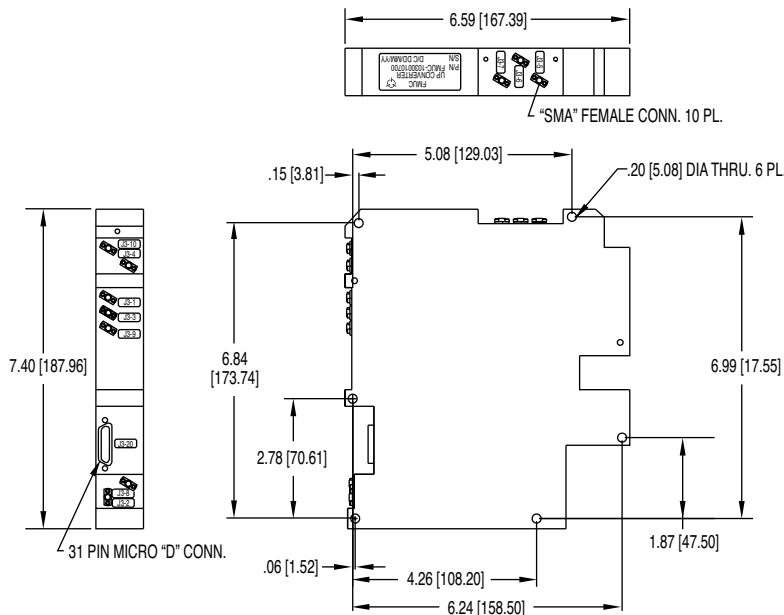
ENVIRONMENTAL CONDITIONS

Operating temperature -20 to +70°C
 Storage temperature -30 to +85°C
 Humidity..... 95% noncondensing
 Vibration..... 18 g's rms, 20-2000 Hz per
 MIL-STD-810B Method 514, Procedure 5

FUNCTIONAL BLOCK DIAGRAM



OUTLINE DRAWING



GENERAL NOTES:

1. Dimensions shown in brackets [] are in millimeters.
2. Tolerance as follows: .xx = ±0.01 [xx = ±0.25], .xxx = ±0.005 [xxx = ±0.13]

