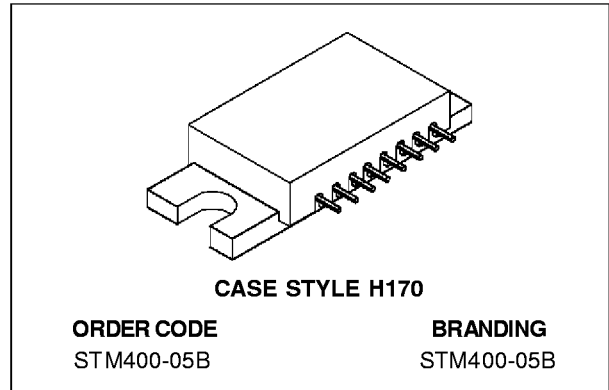


RF POWER MODULE WIRELESS LOCAL LOOP APPLICATIONS

PRELIMINARY DATA

- LINEAR POWER AMPLIFIER
- 340-390 MHz
- 20 VOLTS
- INPUT/OUTPUT 50 OHMS
- $P_{OUT} = 1.12 W_{AVG}$ (2.25 W PEP)
- GAIN = 21 dB

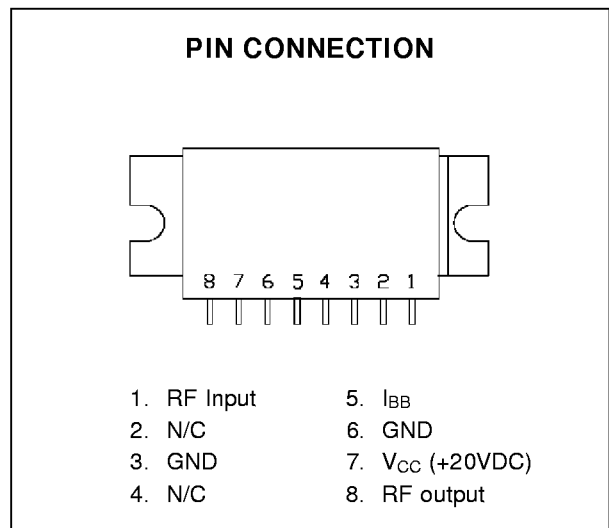


DESCRIPTION

The STM400-05 modules are designed to be used as linear RF Power Amplifiers for WLL or other fixed radio access subscriber applications. This particular model is one of several in design covering the 300-500 MHz frequency range in individual bandwidths of 50 MHz each.

Band splits and corresponding dash numbers for other bands are as follows:

STM400-05A	300-500 MHz
STM400-05B	340-390 MHz
STM400-05C	380-430 MHz
STM400-05D	420-470 MHz
STM400-05E	460-500 MHz



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

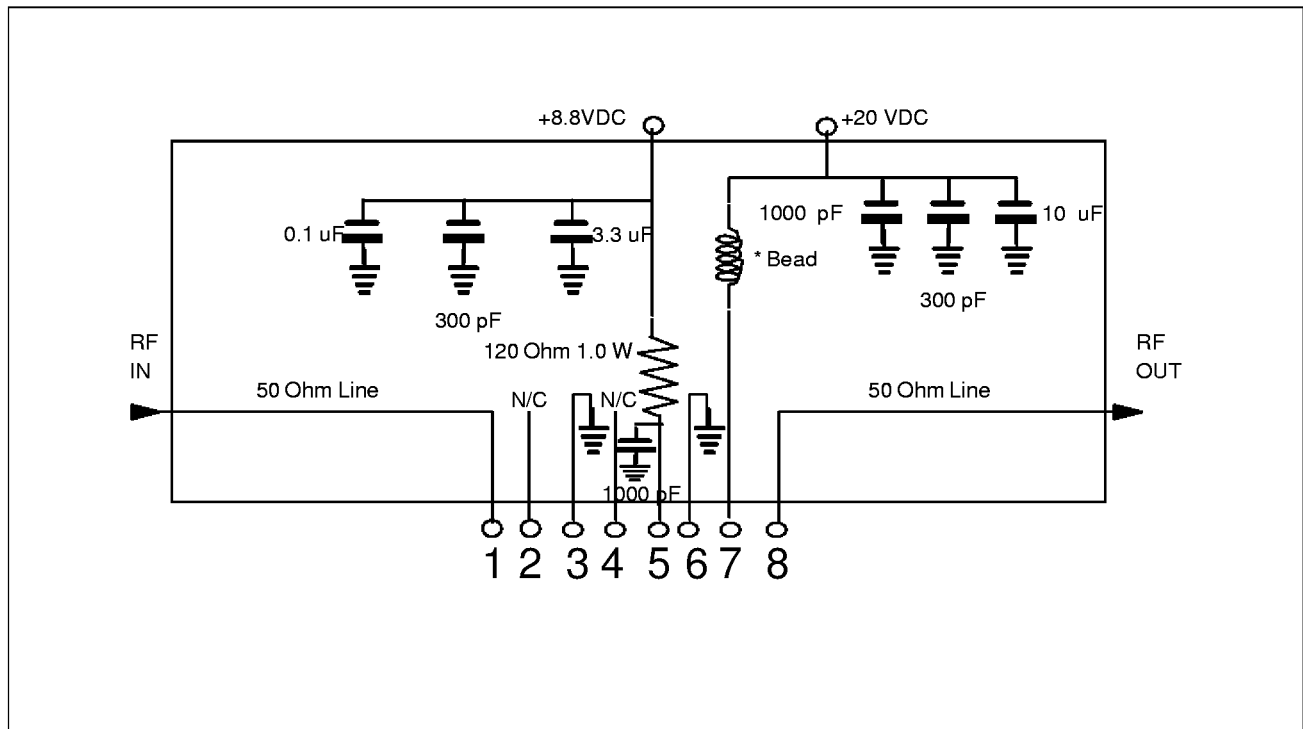
Symbol	Parameter	Value	Unit
V _{CC}	DC Supply Voltage	+21	Vdc
I _{CC(q)}	Quiescent Current (pin 7)	200	mAdc
I _{CC}	Operating Current (pin 7)	500	mAdc
P _{IN}	RF Input Power	30	mW
P _{OUT}	RF Output Power	2.0	W _{AVG}
T _{STG}	Storage Temperature	-30 to +100	°C
T _C	Operating Case Temperature	- 20 to +60	°C

ELECTRICAL SPECIFICATIONS (T_{case} = 30°C, V_{CC} = 20.0Vdc, V_{BB} = 8.8 Vdc)

Symbol	Parameter	Test Conditions	Value			Unit
			Min.	Typ.	Max.	
BW	Frequency Range		340	—	390	MHz
G _P	Power Gain	P _{OUT} = 1.12 W*	21	23	25	dB
η	Efficiency	P _{OUT} = 1.12 W*	12	14	—	%
—	Input VSWR	P _{OUT} = 1.12 W* Z _S , Z _L = 50Ω	—	—	1.5:1	VSWR
I _{CC(q)}	Quiescent Current	P _{IN} = 0 W	110	120	130	mA
I _{CC}	Collector Supply Current	P _{OUT} = 1.12 W*	—	375	425	mA
I _{BB}	Bias Current	P _{OUT} = 1.12 W*	—	65	—	mA
H	Harmonics	P _{OUT} = 1.12 W* F = 340 MHz	—	-34	-30	dBc
IMD	Intermodulation Distortion	P _{OUT} = 1.12 W*		-46	-40	dBc
—	Load Mismatch	Load VSWR = ∞:1 (All phase angles) P _{OUT} = 1.12 W*	No Degradation in Output Power after Load Restoration			
—	Stability	Load VSWR = 5:1 (All phase angles) P _{OUT} = 1.12 W*	All Spurious outputs more than 50dB below carrier			

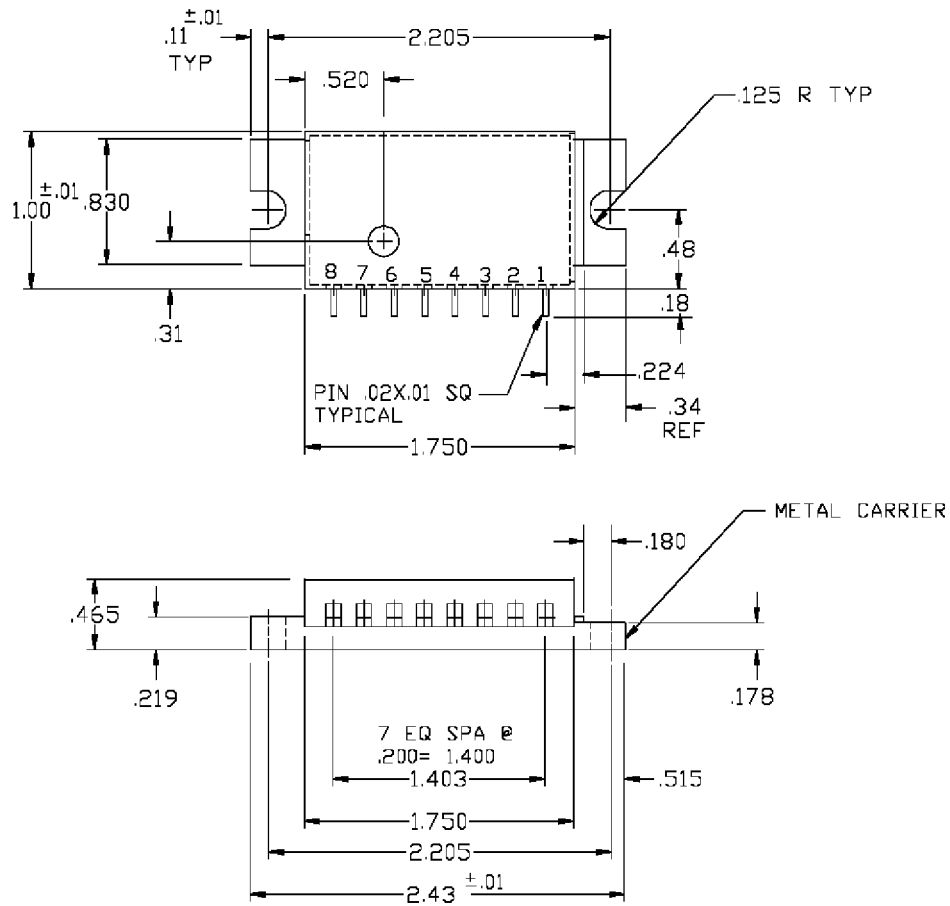
* 2 Tone Test, 50 KHz spacing: P_{OUT} = 1.12 W_{AVG} (2.25 W_{PEP})

MODULE DC AND TEST FIXTURE CONFIGURATION



PACKAGE MECHANICAL DATA

Ref.: UDCS No. 1021374 rev. A



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