

STM351-2

RF POWER MODULE WIRELESS LOCAL LOOP APPLICATIONS

PRELIMINARY DATA

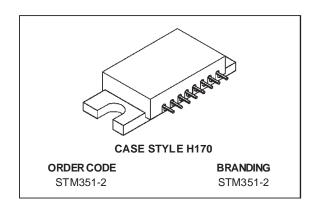
- LINEAR POWER AMPLIFIER
- 325-351 MHz
- 20 VOLTS
- INPUT/OUTPUT 50 OHMS
- $P_{OUT} = 1.0 W_{AVG}$ (2.0 W PEP)
- GAIN = 21 dB

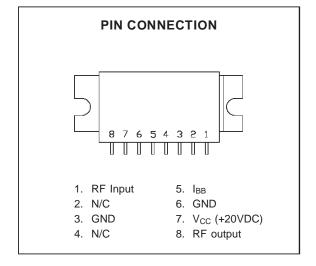


The STM351-2 module is designed to be used as a linear RF Power Amplifier for WLL or other fixed radio access subscriber applications. This particular model is one of several in design covering the 300-500 MHz frequency range in individual bandwidths of 25 MHz each.

Band splits and corresponding part numbers for all bands are as follows:

STM326-2	300-326 MHz	
STM351-2	325-351 MHz	PROTOTYPES
STM376-2	350-376 MHz	AVAILABLE
STM401-2	375-401 MHz	
STM426-2	400-426 MHz	
STM451-2	425-451 MHz	
STM476-2	450-476 MHz	
STM500-2	475-500 MHz	





ABSOLUTE MAXIMUM RATINGS (Tcase =25°C)

Symbol	Symbol Parameter		Unit	
Vcc	DC Supply Voltage	+21	Vdc	
I _{CC(q)}	Quiescent Current (pin 7)	200	mAdc	
Icc	Operating Current (pin 7)	500	mAdc	
P _{IN}	RF Input Power	30	mW	
Роит	RF Output Power	2.0	Wavg	
T _{STG}	Storage Temperature	-30 to +100	°C	
Tc	Operating Case Temperature	– 20 to +60	°C	

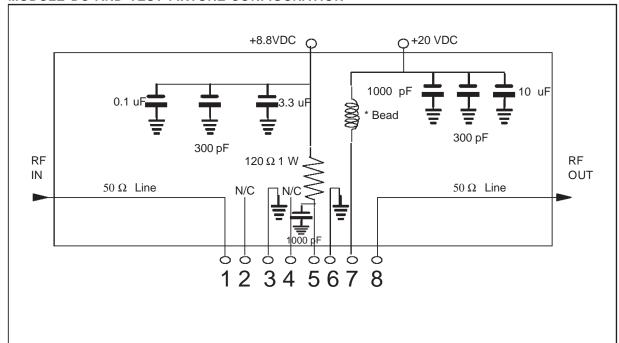
June 15, 1998 1/3

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

Cumbal	Parameter	Test Conditions		Value			Unit
Symbol				Min.	Тур.	Max.	Unit
BW	Frequency Range			325	_	351	MHz
GP	Power Gain	P _{OUT} = 1.0 W*		21	23	25	dB
η	Efficiency	Pout = 1.0 W*		11	12.5	_	%
_	Input VSWR	P _{OUT} = 1.0 W*	$Z_S, Z_L = 50\Omega$	_	_	1.5:1	VSWR
I _{CC(q)}	Quiescent Current	P _{IN} = 0 W		110	120	130	mA
Icc	Collector Supply Current	Pout = 1.0 W*		_	375	425	mA
I _{BB}	Bias Current	P _{OUT} = 1.0 W*		_	65	_	mA
Н	Harmonics	Pout = 1.0 W*	F = 325 MHz	_	-34	-30	dBc
IMD	Intermodulation Distortion	P _{OUT} = 1.0 W*			-46	-40	dBc
_	Load Mismatch	Load VSWR = ∞:1 P _{OUT} = 1.0 W*	(All phase angles)	No Degradation in Outpu Power after Load Restorat		•	
_	Stability	Load VSWR = 5:1 Pout = 1.0 W*	(All phase angles)	All Spurious outputs more than 50dB below carrier			

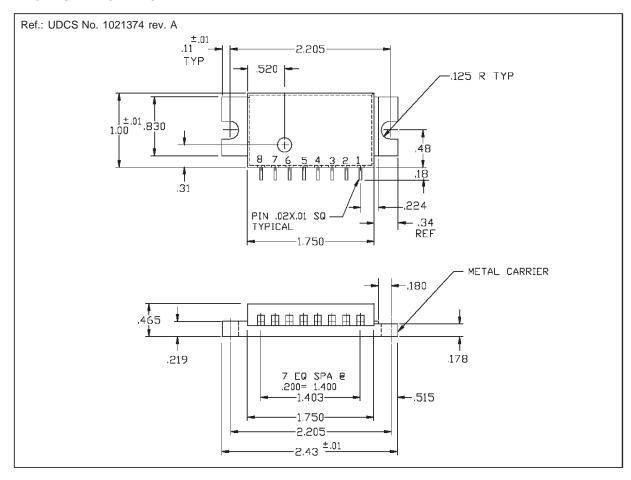
^{* 2} Tone Test, 50 KHz spacing: $P_{OUT} = 1.0 W_{AVG} (2.0 W_{PEP})$

MODULE DC AND TEST FIXTURE CONFIGURATION



57.

PACKAGE MECHANICAL DATA



Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a registered trademark of STMicroelectronics

©1998 STMicroelectronics - All Rights Reserved

STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - France - Germany - Italy - Japan - Korea

Malaysia - Malta - Mexico - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland

Taiwan - Thailand - United Kingdom - U.S.A.

