

UHF Power Amplifier

PA-TR1-434M

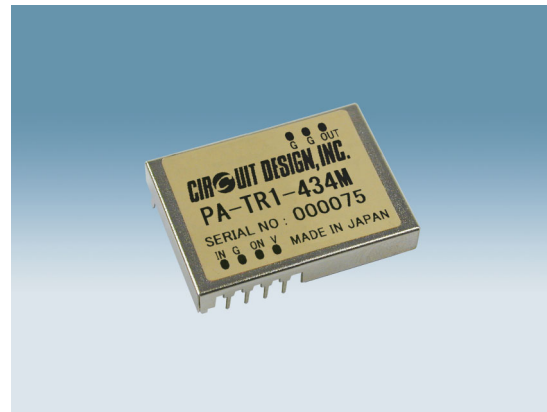
PA-TR1 is a power amplifier module operating on UHF frequencies. This module is designed to be connected with Circuit Design's RF modules for applications requiring higher power transmission. PA-TR1 has an Amplifier/Through Line selectable circuit, which allows operation in half duplex applications. This amplifier has 14 dB gain with only 3V power supply. The small-thin package (5mm high) enables installation into compact equipment.

Features

- 3V operation
- Connectable to transceivers
- Amplifier or Through Line selectable
- Small, thin package

Applications

- Telemetry
 - Monitoring system for environmental data (water level, temperature, humidity etc)
- Telecontrol
 - Industrial remote control systems
- Security
 - Security alarm systems



Specification

Maximum ratings (Ta=25C)					
Parameter	Symbol	Rating	Unit	Condition	
Supply Voltage	Vcc	3.3	V		
Operation Current	ID	500	mA		
Total Power Dissipation	Plot	1.2	W	RF input 13dBm Output 27dBm (50ohm terminated)	
Max operating temperature	Tax	70	C	At top surface of shield case (including self heating)	
Channel Temperature	Tech	125	C	Refer NE550379A	

(*The units should be used with heat radiating condition that temperature at the top surface should not go over 65 degree)

Item	Condition	Min.	Typ.	Max.	Unit
Operating Voltage Range		2.8	3	3.2	V
Consumption Current	25 C	250	310	400	mA
Output Impedance	Un-balanced		50		Ohm
Input Impedance	Un-balanced		50		Ohm
Output VSWR				1.5	
Input VSWR				1.5	
ANT VSWR	At operating frequency			1.5	
Operating Frequency Range	+/-3dB	419	434	449	MHz
Input Power		0	10	13	dBm
Output Power	Vcc=3V, 434MHz Pin=10dBm 25 C		24	26	dBm
Power Gain	Vcc=3V, 434MHz Pin=10dBm 25 C		14		dB
			60		dBc
Spurious Ratio	Carrier/2nd harmonics				dB
Insertion loss	Power AMP OFF	1	2	3.5	C
Operating Temperature	At top of shielding case*	-20		65	
Final Stage Amplifier		SILICON POWER MOS FET (NEC)			
Dimensions	W x L X H	26.6	x 18.6	x 5	mm

(*The temperature indicated is a surrounding temperature + self heating temperature.)

Specifications are subject to change without prior notice

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