HIGH FREQUENCY HYBRID ICs

High frequency power amplifier

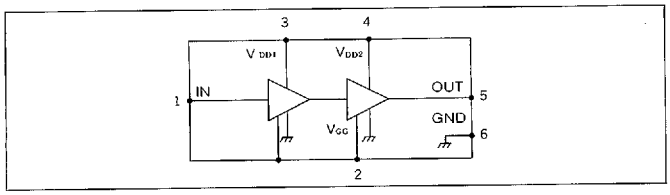
FEATURES

This is a RF power amplifier of small size and high performance covering 900 MHz band. This is designed to limit at minimum the supply current by using FET of high speed and effective GaAs. It is suitable for analog system portable telephone. It is applicable for U.K. TACS system of 872 to 905 MHz band.

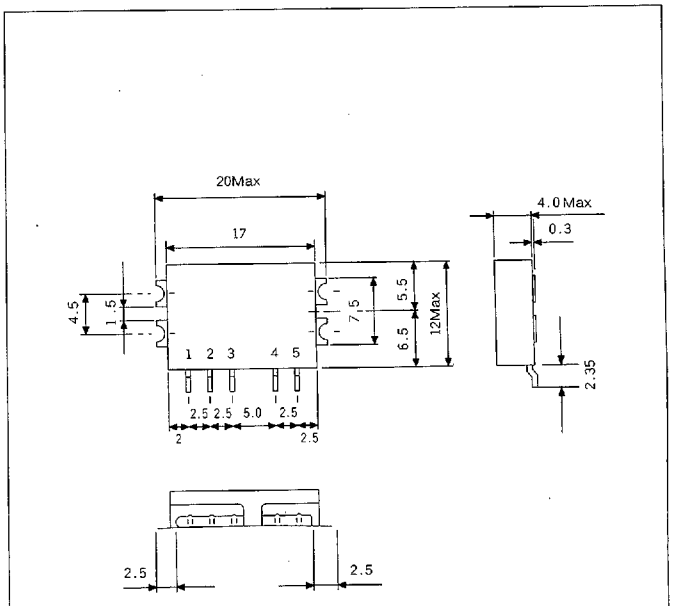
ABSOLUTE MAXIMUM RATING

Rating	Symbol	Value	Unit	Condition
DC supply Voltage	V_{DD1}	7	V	
	V_{DD2}	10	V	$V_{GG}=-3.7V$
DC supply Voltage	V_{GG}	−5	V	
RF input power	Pin	+12	dBm	$Zg=ZL=50\Omega$
Operating Case Temperature Range	Topr	−25~+75	℃	$Zg=ZL=50\Omega$
Storage Temperature	Tstg	−35~+120	℃	

EQUIVALENT CIRCUIT



OUTLINE DIMENSIONS



ELECTRICAL CHARACTERISTICS(Tc=25℃)

Characteristics	Symbol	Min	Max	Unit	Measuring Condition
RF Output Power 1	Pout1	30.5		dBm	f=872~905MHz Pin=7dBm, V_{DD1}=4.7V V_{DD2}=4.7V, V_{GG}=−3.7V
RF Output Power 2	Pout2	28.2		dBm	f=872~905MHz Pin=7dBm, V_{DD1}=4.2V V_{DD2}=4.2V, V_{GG}=−3.7V
Total Current	IccT		460	mA	Pout=30.0dBm V_{DD1}=Controlled V_{DD2}=4.7V, V_{GG}=−3.7V
Input VSWR	VSWR		3	—	f=872~905MHz Pin=7dBm, V_{DD1}=4.7V V_{DD2}=4.7V, V_{GG}=−3.7V
Gate Current	IGG		3	mA	
Harmonic output (2nd) (3rd) (4th)	2fo 3fo 4fo		−25 −25 −25	dBc	
Idle Current	IDD		250	mA	Pin=NONE, V_{DD1}=4.7V V_{DD2}=4.7V, V_{GG}=−3.7V
Stability		all sprious output more than 60 dB below desired signal level			Pin=12dBm V_{DD1}=0~6V V_{DD2}=0~6V V_{GG}=−3.7V LOAD VSWR<3 ALL PHASE f=872~905MHz
Load Mismatch		NO MODULE DAMAGE			Pin=12dBm V_{DD1}=6V V_{DD2}=6V V_{GG}=−3.7V LOAD VSWR=20 10s ALL PHASE f=872~905MHz