M 5 7 7 6 2
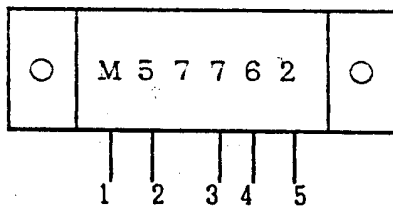
1296MHz LINEAR POWER AMPLIFIER INTEGRATED CIRCUIT

Pin 1; RF input
Pin 2; Power for 1st stage
Pin 3; Base bias
Pin 4; Power for 2nd and 3rd stage
Pin 5; RF output
*The flange is electrically and thermally connected to every Emitter of Transistor inside. You must employ an adequate Heat Sink to keep the IC not too hot. It is not neccessary to insulate the flange from the Heat Sink electrically.

MAXIMUM RATINGS   T=25°C

DESCRIPTION	SYMBOL	RATING	UNIT	CONDITION
Supply Voltage	V_{cc}	17	Volt	—
Base Bias Voltage	V_{BB}	10	Volt	—
Current Consumption	I_{cc}	8	Ampere	—
Drive Power	P_{IN}	2	Watt	$V_{cc}=12.5V$, $V_{BB}=9V$
RF Output	P_o	25	Watt	$Z=50\Omega$

CHARACTERISTICS

DESCRIPTION	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
RF Output	P_o	18	20		Watt	$V_{cc}=12.5V, V_{BB}=9V, P_{IN}=1W$
Efficiency	η	30	35		%	Same as above
Bias Curr.	I_{BB}			500	mA	Same as above
2nd Harm.				-45	dB	Same as above
Input VSWR	ρ			2.0	—	Same as above
Power Gain	G_p	13			dB	$V_{cc}=12.5V, V_{BB}=9V, P_{IN}=10mW$
3rd I.M.				-24	dB	$V_{cc}=12.5V, V_{BB}=9V, P_o=14W$

$Z_G=Z_L=50\Omega$, 1.24 through 1.3GHz frequency range, T=25°C

Feb. 1987