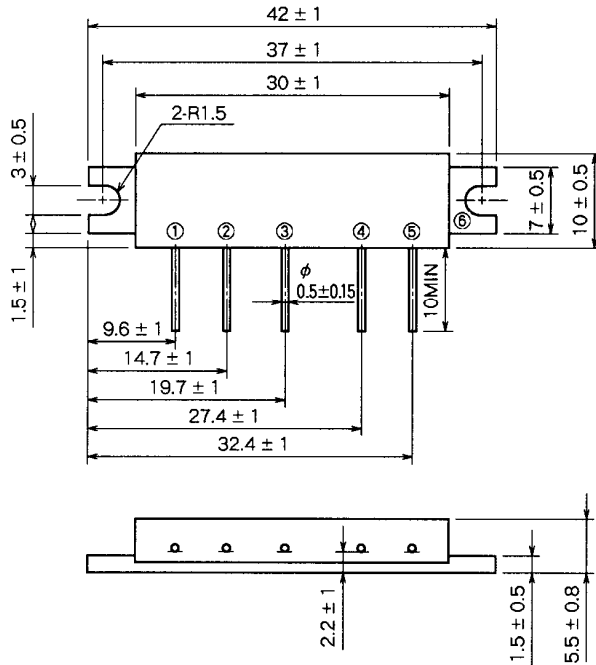


# M67749L

400-430MHz, 12.5V, 7W, FM PORTABLE RADIO

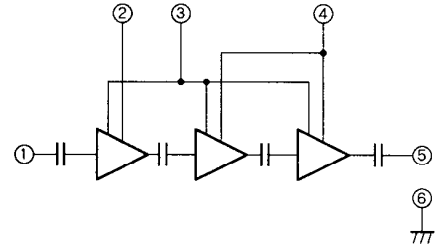
## OUTLINE DRAWING

Dimensions in mm



H27

## BLOCK DIAGRAM



PIN :

- ① Pin : RF INPUT
- ② Vcc1 : 1nd. DC SUPPLY
- ③ VBB : BASE BIAS SUPPLY
- ④ Vcc2 : 2nd. DC SUPPLY
- ⑤ Po : RF OUTPUT
- ⑥ GND : FIN

## ABSOLUTE MAXIMUM RATINGS (Tc = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply voltage	V <sub>BB</sub> ≤ 5V	15	V
V <sub>BB</sub>	Base bias	V <sub>cc</sub> ≤ 12.5V	5.5	V
I <sub>cc</sub>	Total current		4	A
P <sub>in(max)</sub>	Input power	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω, V <sub>cc1</sub> ≤ 12.5V	40	mW
P <sub>O(max)</sub>	Output power	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω	10	W
T <sub>c(OP)</sub>	Operation case temperature		- 30 to 110	°C
T <sub>stg</sub>	Storage temperature		- 40 to 110	°C

Note. Above parameters are guaranteed independently.

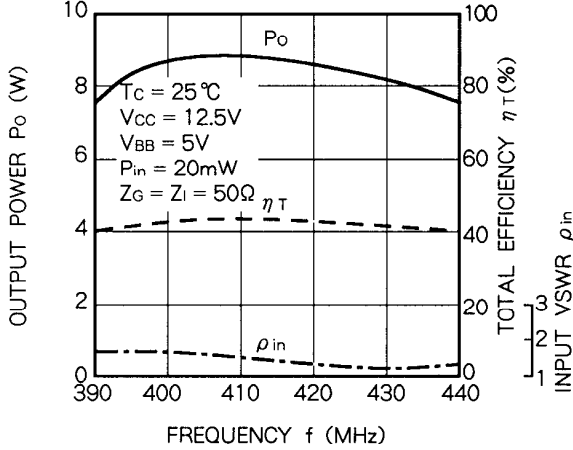
## ELECTRICAL CHARACTERISTICS (Tc = 25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range	P <sub>in</sub> = 20mW V <sub>BB</sub> = 5V V <sub>cc</sub> = 12.5V Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω	400	430	MHz
P <sub>o</sub>	Output power		7		W
η <sub>T</sub>	Total efficiency		35		%
2f <sub>o</sub>	2nd. harmonic			- 25	dBc
3f <sub>o</sub>	3rd. harmonic			- 30	dBc
ρ <sub>in</sub>	Input VSWR			2.5	-
-	Load VSWR tolerance	V <sub>cc2</sub> = 13.2V, V <sub>BB</sub> = 5V, P <sub>in</sub> = 20mW P <sub>o</sub> = 7W (V <sub>cc1</sub> : controlled) Load VSWR = 20 : 1 (All phase), Z <sub>G</sub> = 50Ω	No degradation or destroy		-

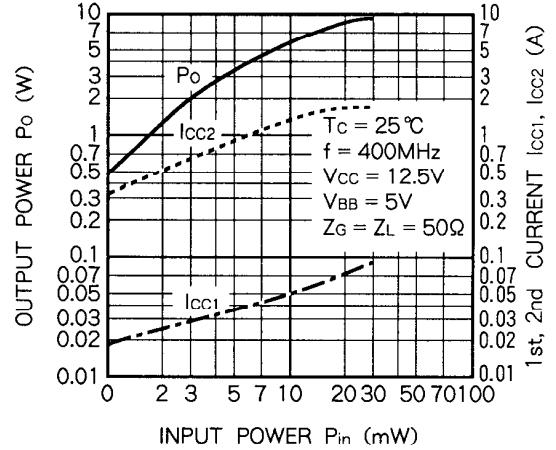
Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

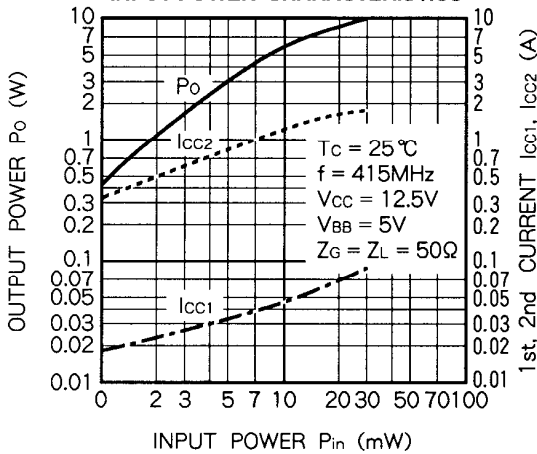
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



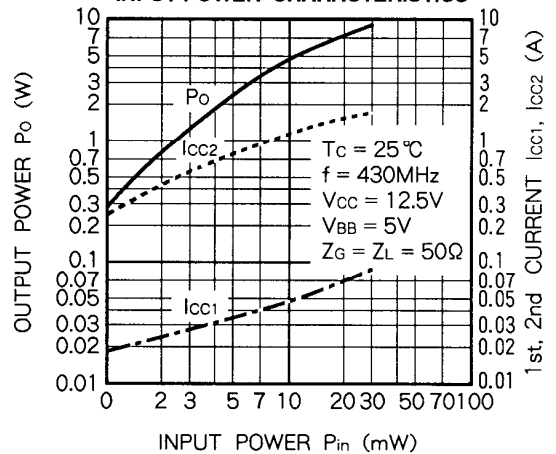
OUTPUT POWER, 1st, 2nd CURRENT VS. INPUT POWER CHARACTERISTICS



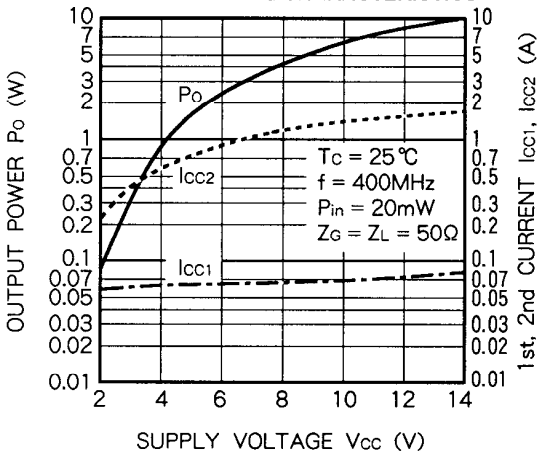
OUTPUT POWER, 1st, 2nd CURRENT VS. INPUT POWER CHARACTERISTICS



OUTPUT POWER, 1st, 2nd CURRENT VS. INPUT POWER CHARACTERISTICS



OUTPUT POWER, 1st, 2nd CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, 1st, 2nd CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS

