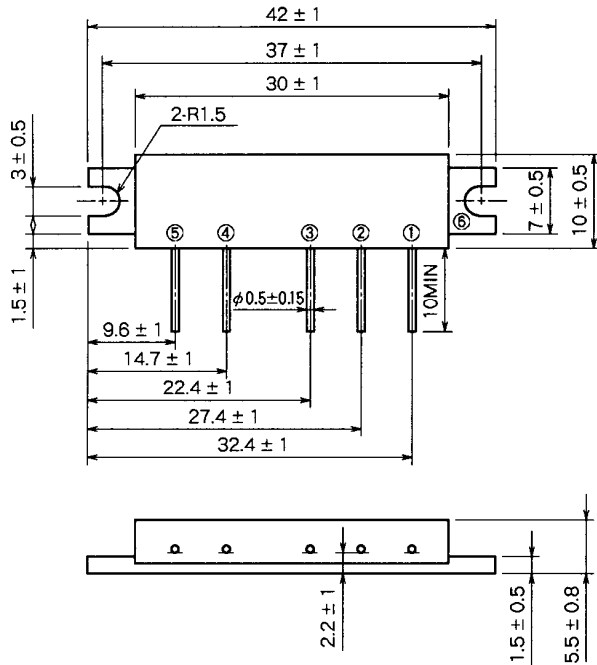


# M67749HR

440-470MHz, 12.5V, 7W, FM PORTABLE RADIO

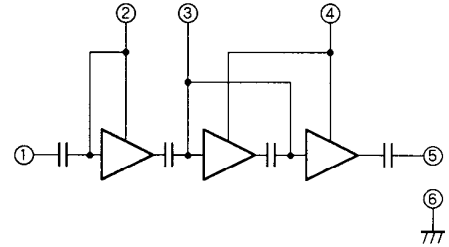
## OUTLINE DRAWING

Dimensions in mm



H27R

## BLOCK DIAGRAM



PIN :

- ① Pin : RF INPUT
- ② Vcc1 : 1st. 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	16	V
V <sub>BB</sub>	Base bias	V <sub>cc</sub> ≤ 12.5V	6	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		440	470	MHz
P <sub>o</sub>	Output power	P <sub>in</sub> = 20mW	7		W
η <sub>T</sub>	Total efficiency	V <sub>BB</sub> = 5V	38		%
2f <sub>o</sub>	2nd. harmonic	V <sub>cc</sub> = 12.5V		- 25	dBc
3f <sub>o</sub>	3rd. harmonic	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω		- 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), 2sec. Z <sub>G</sub> = 50Ω	No degradation or destroy		-

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