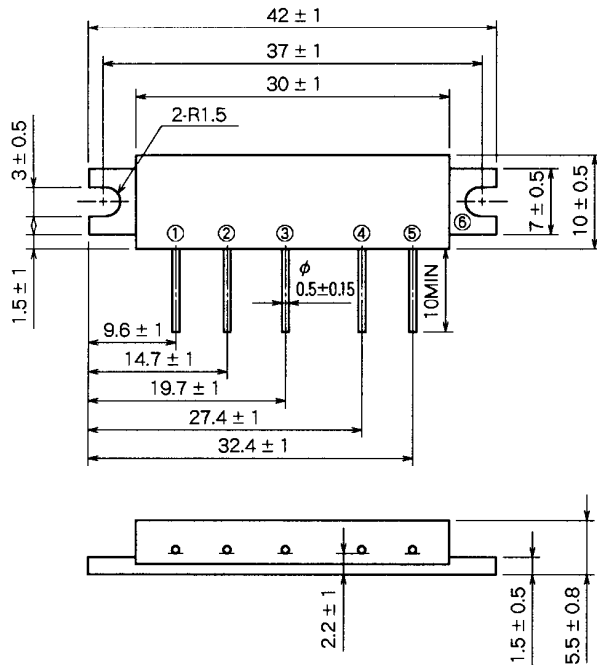


# M67748L

135-150MHz, 12.5V, 7W, FM PORTABLE RADIO

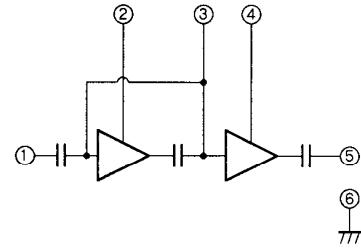
### OUTLINE DRAWING

Dimensions in mm



H27

### BLOCK DIAGRAM



PIN :

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

### ABSOLUTE MAXIMUM RATINGS (T<sub>c</sub> = 25 °C unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>cc</sub>	Supply voltage	V <sub>BB</sub> = 5V	15	V
V <sub>BB</sub>	Base bias		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

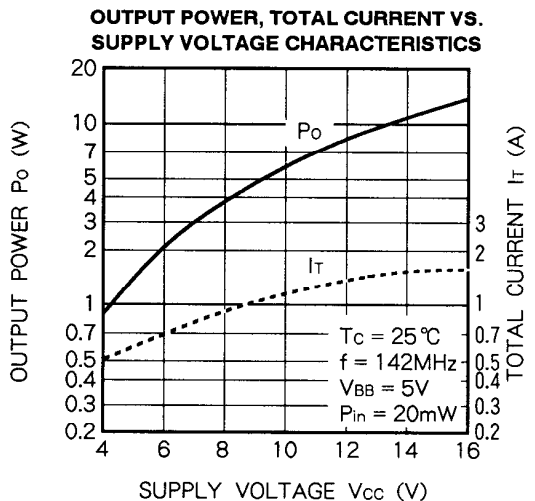
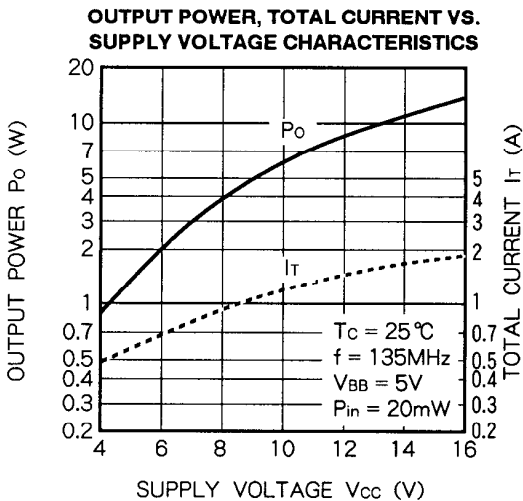
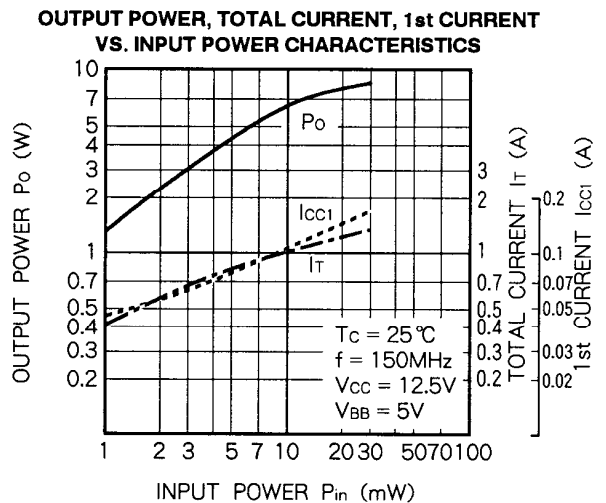
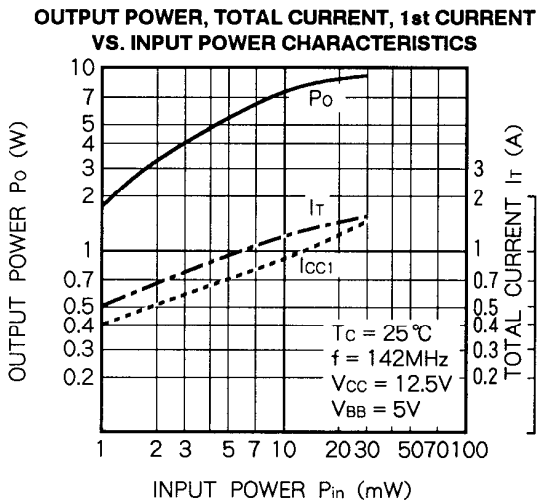
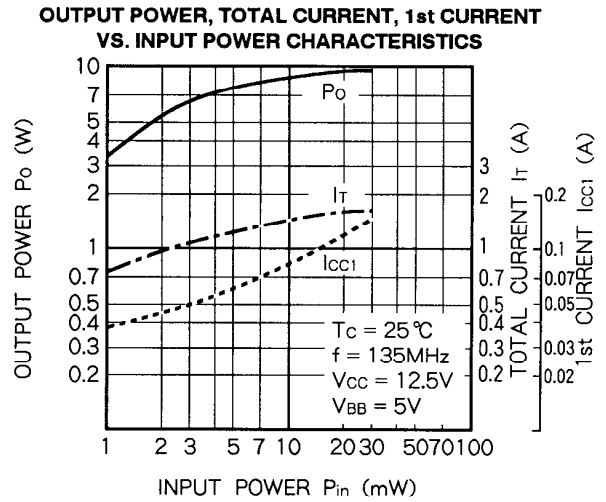
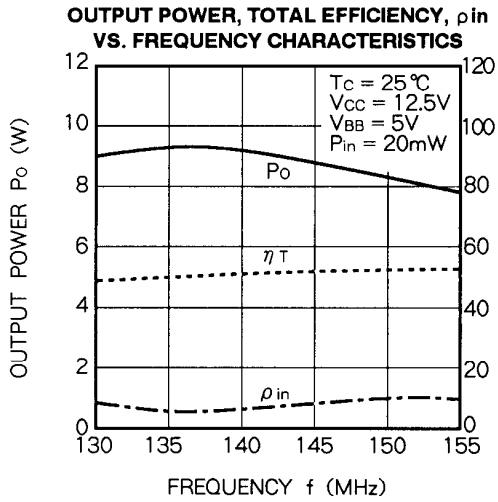
Note. Above parameters are guaranteed independently.

### ELECTRICAL CHARACTERISTICS (T<sub>c</sub> = 25 °C unless otherwise noted)

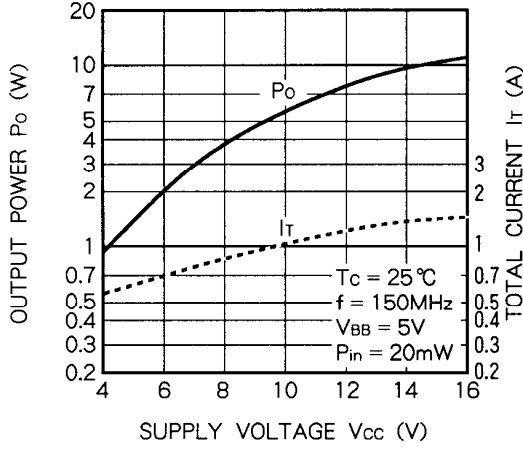
Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		135	150	MHz
P <sub>o</sub>	Output power	P <sub>in</sub> = 20mW	7		W
η <sub>T</sub>	Total efficiency	V <sub>BB</sub> = 5V	45		%
2f <sub>o</sub>	2nd. harmonic	V <sub>cc</sub> = 12.5V		- 20	dBc
3f <sub>o</sub>	3rd. harmonic	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω		- 25	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>o</sub> = 7W(V <sub>cc1</sub> : controlled)P <sub>in</sub> = 20mW 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.

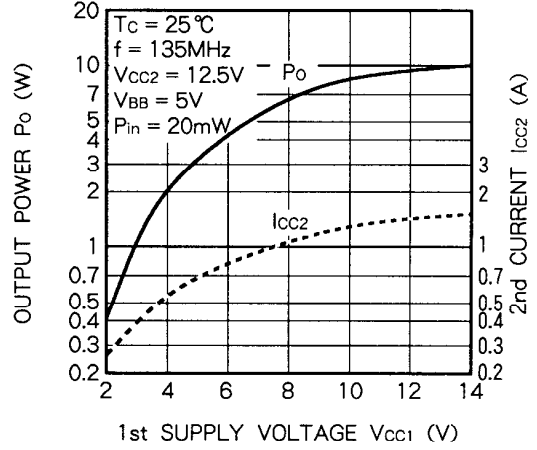
TYPICAL PERFORMANCE DATA



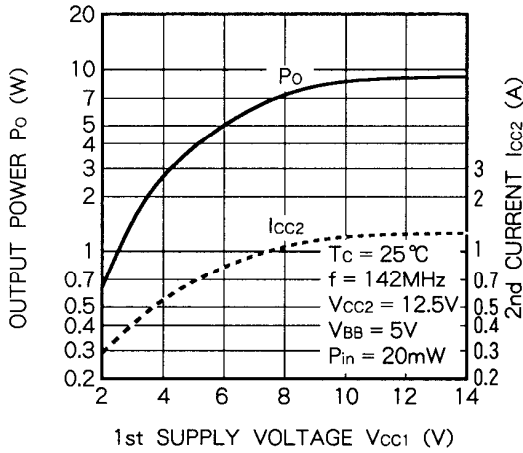
**OUTPUT POWER, TOTAL CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS**



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



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



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

