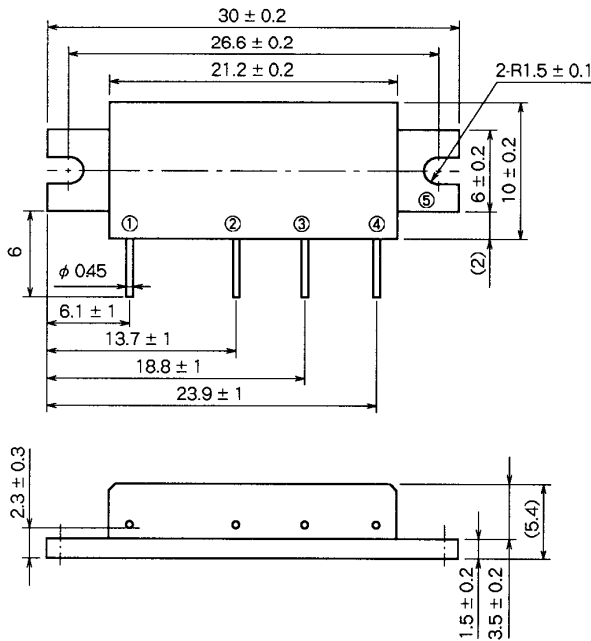


# M67798LA

144-148MHz, 9.6V, 8W FM PORTABLE RADIO

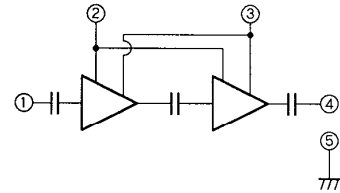
## OUTLINE DRAWING

Dimensions in mm



H46

## BLOCK DIAGRAM



PIN :

- ① Pin : RF INPUT
- ② V<sub>GG</sub> : GATE BIAS SUPPLY
- ③ V<sub>DD</sub> : DRAIN BIAS SUPPLY
- ④ P<sub>o</sub> : RF OUTPUT
- ⑤ GND : FIN

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

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>DD</sub>	Supply voltage	V <sub>GG</sub> ≤ 3.5V, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	16	V
V <sub>GG</sub>	Gate bias voltage		4	V
P <sub>in</sub>	Input power	f = 144 to 148MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	30	mW
P <sub>o</sub>	Output power	f = 144 to 148MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	10	W
T <sub>C(OP)</sub>	Operation case temperature	f = 144 to 148MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	- 30 to 100	°C
T <sub>stg</sub>	Storage temperature		- 40 to 110	°C

Note : Above parameters are guaranteed independently.

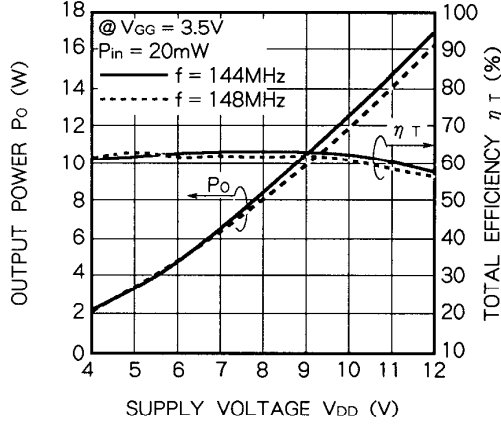
## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25 °C, Z<sub>G</sub> = Z<sub>L</sub> = 50Ω, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		144	148	MHz
P <sub>o</sub>	Output power		8	—	W
η <sub>T</sub>	Total efficiency	V <sub>DD</sub> = 9.6V V <sub>GG</sub> = 3.5V P <sub>in</sub> = 20mW	53	—	%
2f <sub>o</sub>	2nd. harmonic		—	- 20	dBc
3f <sub>o</sub>	3rd. harmonic		—	- 30	dBc
ρ <sub>in</sub>	Input VSWR		—	3	—
—	Stability	Z <sub>G</sub> = 50Ω, V <sub>DD</sub> = 4.8 to 13.2V, Load VSWR < 4 : 1	No parasitic oscillation		—
—	Load VSWR tolerance	V <sub>DD</sub> = 13.2V, P <sub>in</sub> = 20mW, P <sub>o</sub> = 8W(V <sub>GG</sub> Adjust), Z <sub>L</sub> = 20 : 1	No degradation or destroy		—

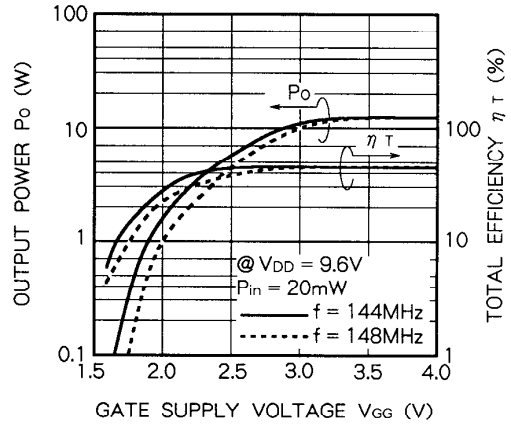
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. FREQUENCY CHARACTERISTICS

