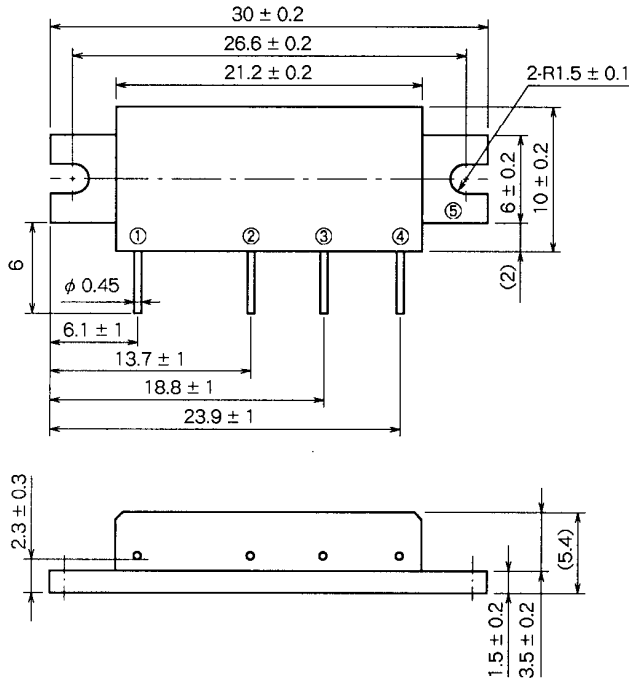


# M67799MA

430-450MHz, 9.6V, 7.5W, FM PORTABLE RADIO

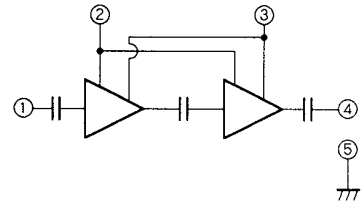
## OUTLINE DRAWING

Dimensions in mm



H46

## BLOCK DIAGRAM



PIN :

- ①P<sub>in</sub> : RF INPUT
- ②V<sub>GG</sub> : GATE BIAS SUPPLY
- ③V<sub>DD</sub> : DRAIN BIAS SUPPLY
- ④P<sub>o</sub> : RF OUTPUT
- ⑤GND : 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 = 430 to 450MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	30	mW
P <sub>o</sub>	Output power	f = 430 to 450MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	10	W
T <sub>c(OP)</sub>	Operation case temperature	f = 430 to 450MHz, 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.

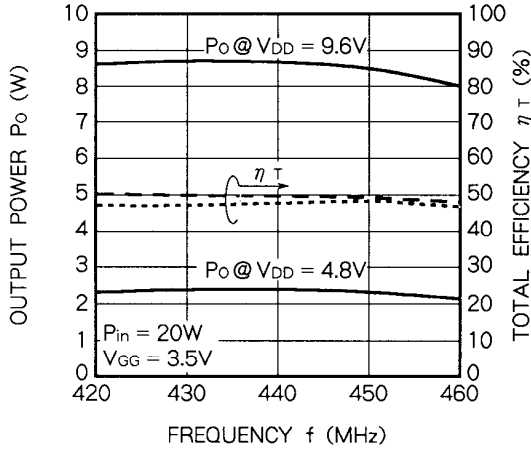
## ELECTRICAL CHARACTERISTICS (T<sub>c</sub> = 25 °C, Z<sub>G</sub> = Z<sub>L</sub> = 50Ω, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		430	450	MHz
P <sub>o</sub>	Output power		7.5		W
η <sub>T</sub>	Total efficiency	V <sub>DD</sub> = 9.6V	43		%
2f <sub>o</sub>	2nd. harmonic	V <sub>GG</sub> = 3.5V		- 25	dBc
3f <sub>o</sub>	3rd. harmonic	P <sub>in</sub> = 20mW		- 30	dBc
ρ <sub>in</sub>	Input VSWR			4	-
-	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> = 7.5W(V <sub>GG</sub> Adjust), Z <sub>L</sub> = 20 : 1	No degradation or destroy		-

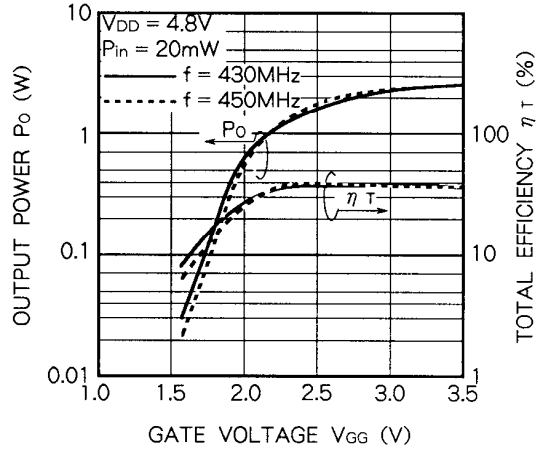
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

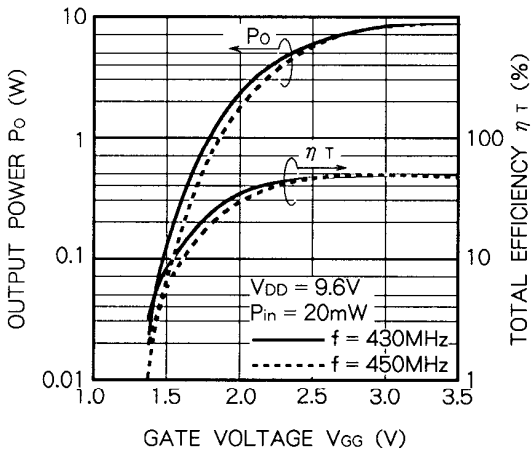
OUTPUT POWER, TOTAL EFFICIENCY VS. FREQUENCY CHARACTERISTICS



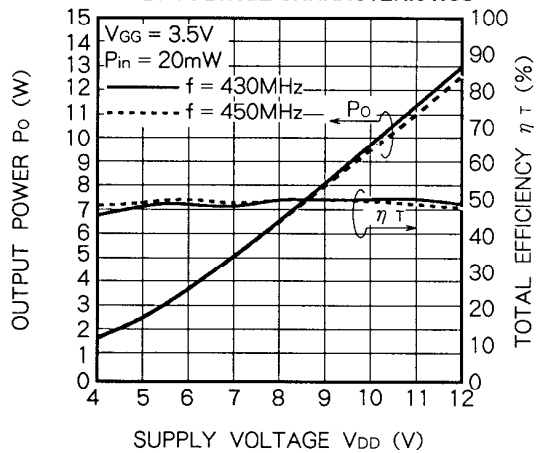
OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS

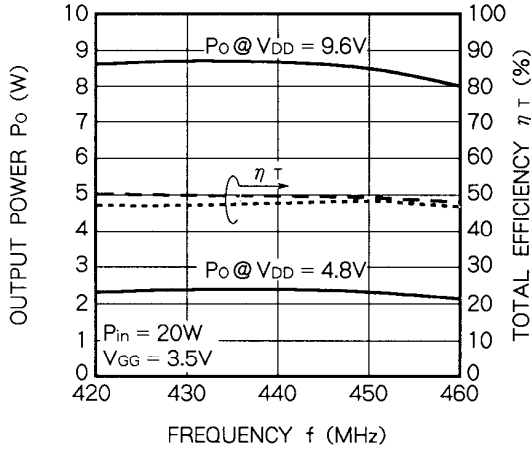


OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS

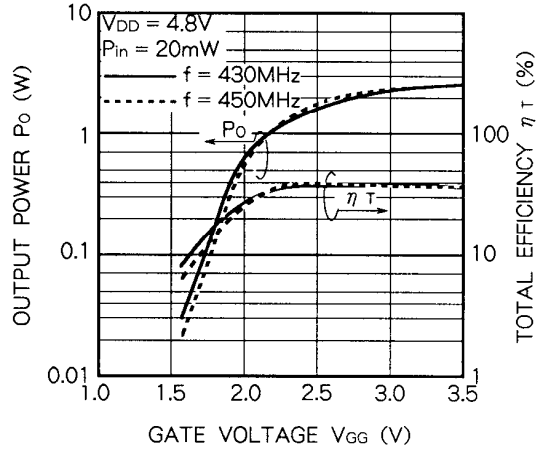


TYPICAL PERFORMANCE DATA

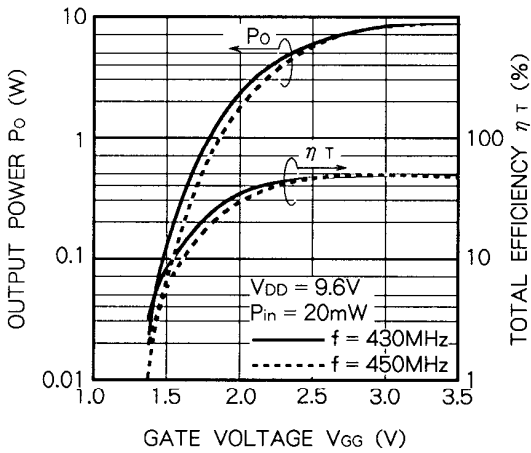
OUTPUT POWER, TOTAL EFFICIENCY VS. FREQUENCY CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS

