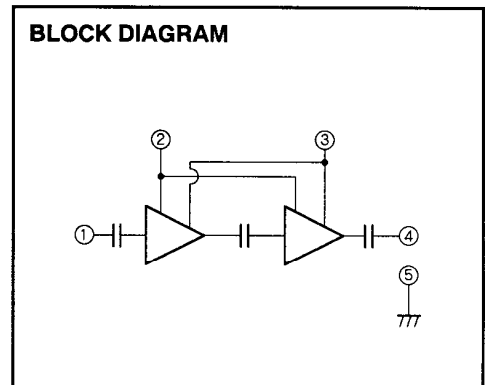
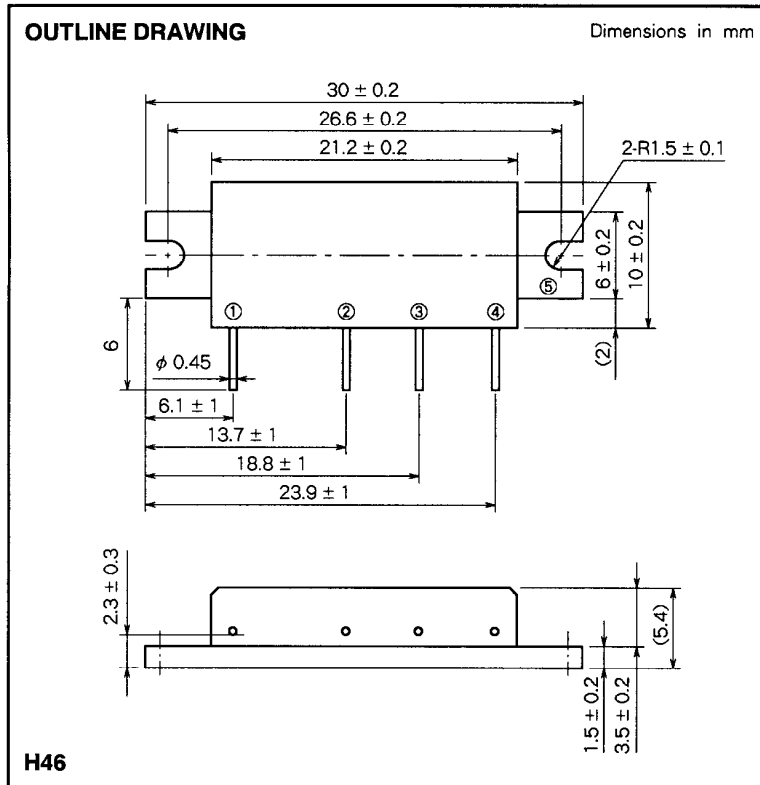


# M68712N

142-163MHz, 6V, 2W, FM PORTABLE RADIO



- 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	9	V
V <sub>GG</sub>	Gate bias voltage		4	V
P <sub>in</sub>	Input power	f = 142 to 163MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	30	mW
P <sub>o</sub>	Output power	f = 142 to 163MHz, V <sub>DD</sub> ≤ 9V, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	3	W
T <sub>C(OP)</sub>	Operation case temperature	f = 142 to 163MHz, V <sub>DD</sub> ≤ 9V, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	- 30 to 110	°C
T <sub>stg</sub>	Storage temperature		- 40 to 110	°C

Note : Above parameters are guaranteed independently.

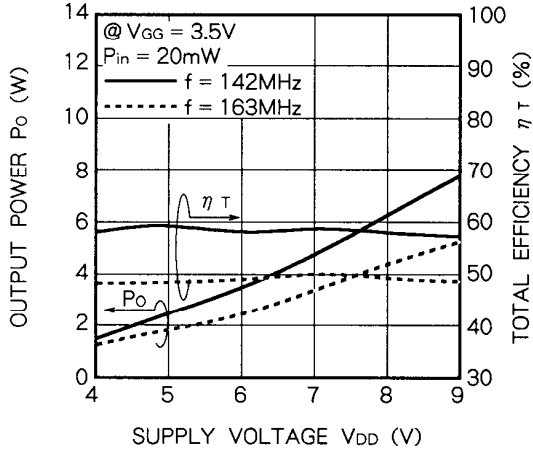
**ELECTRICAL CHARACTERISTICS** (T<sub>C</sub> = 25°C, Z<sub>G</sub> = Z<sub>L</sub> = 50Ω, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		142	163	MHz
P <sub>o</sub>	Output power		2		W
η <sub>T</sub>	Total efficiency	V <sub>DD</sub> = 6V	45		%
2f <sub>o</sub>	2nd. harmonic	V <sub>GG</sub> = 3.5V		- 20	dBc
3f <sub>o</sub>	3rd. harmonic	P <sub>in</sub> = 20mW		- 30	dBc
ρ <sub>in</sub>	Input VSWR			3	-
-	Stability	Z <sub>G</sub> = 50Ω, V <sub>DD</sub> = 4 to 9V, Load VSWR < 4 : 1	No parasitic oscillation		-
-	Load VSWR tolerance	V <sub>DD</sub> = 9V, P <sub>in</sub> = 20mW, P <sub>o</sub> = 3W(V <sub>GG</sub> Adjust), Z <sub>L</sub> = 20 : 1	No degradation or destroy		-

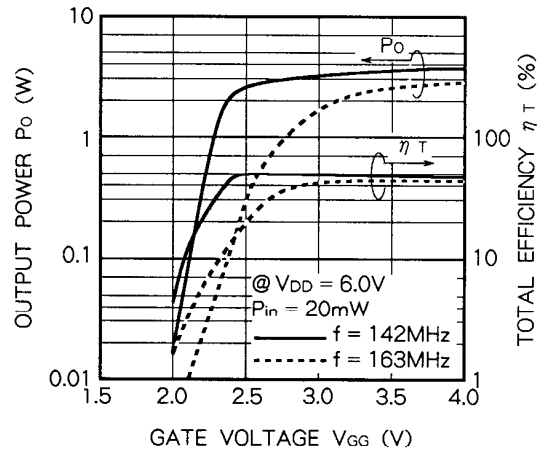
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. FREQUENCY CHARACTERISTICS

