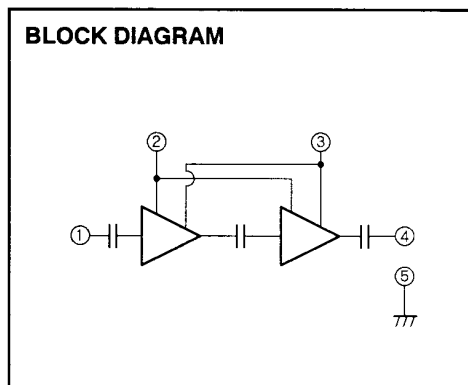
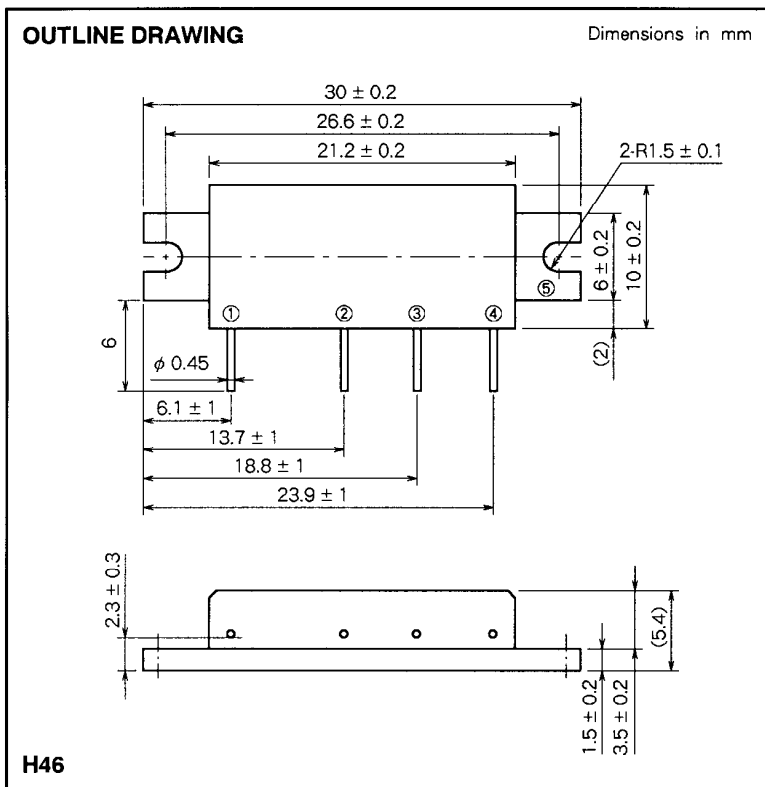


# M68710H

450-470MHz, 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 = 450 to 470MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	30	mW
P <sub>O</sub>	Output power	f = 450 to 470MHz, 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 = 450 to 470MHz, 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.

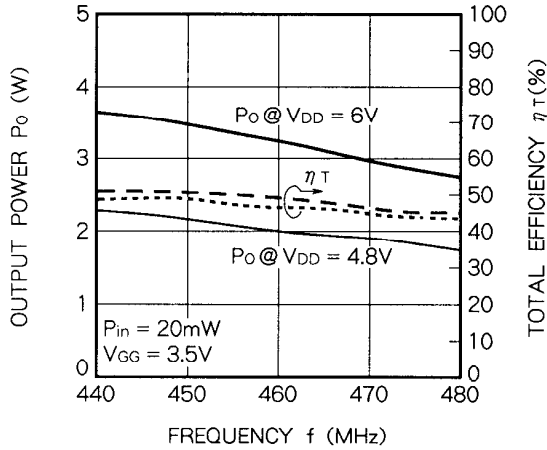
**ELECTRICAL CHARACTERISTICS** (T<sub>C</sub> = 25°C, Z<sub>G</sub> = Z<sub>L</sub> = 50Ω, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		450	470	MHz
P <sub>O</sub>	Output power		2		W
η <sub>T</sub>	Total efficiency	V <sub>DD</sub> = 6V	40		%
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 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		-

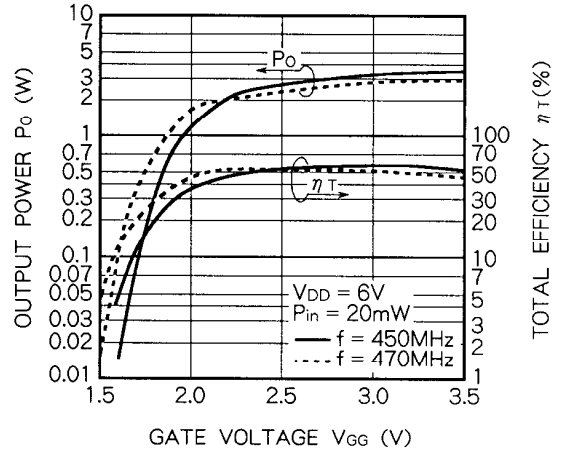
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

OUTPUT POWER, TOTAL EFFICIENCY VS. FREQUENCY CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS

