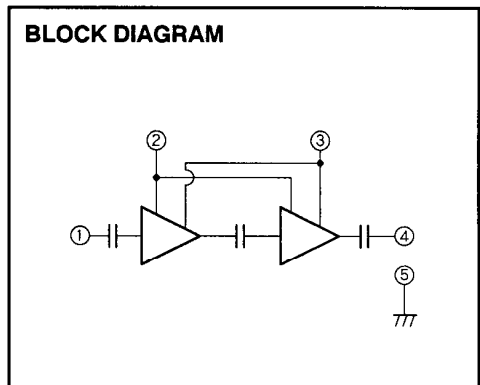
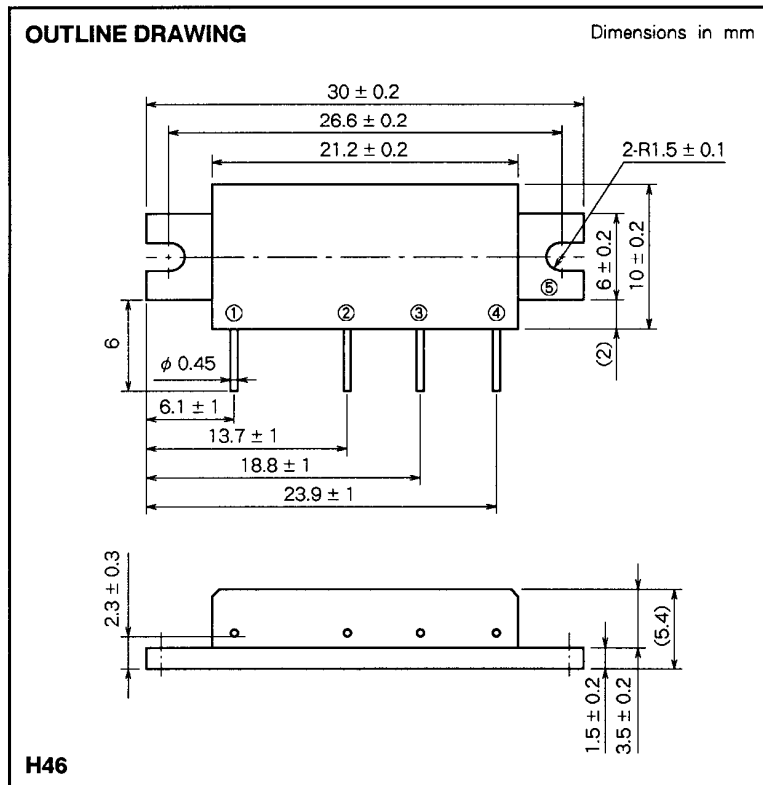


# M68710UL

380-400MHz, 6V, 2W FM PORTABLE RADIO



PIN :

- ① P<sub>in</sub> : 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=380 to 400MHz, Z <sub>G</sub> =Z <sub>L</sub> =50Ω	30	mW
P <sub>o</sub>	Output power	f=380 to 400MHz, 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=380 to 400MHz, 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.

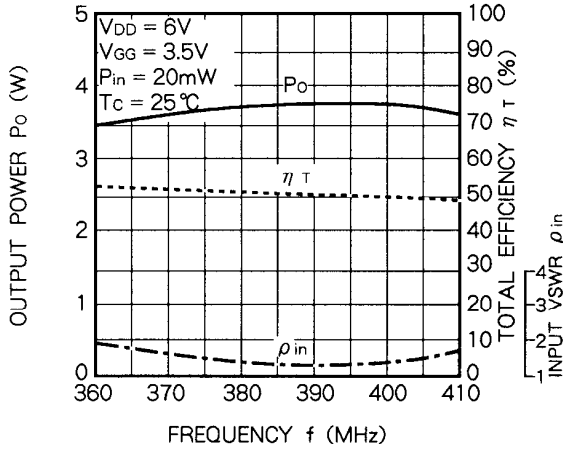
**ELECTRICAL CHARACTERISTICS** (T<sub>c</sub> = 25 °C, Z<sub>G</sub> = Z<sub>L</sub> = 50Ω, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit	
			Min	Max		
f	Frequency range		380	400	MHz	
P <sub>o</sub>	Output power	V <sub>DD</sub> = 6V V <sub>GG</sub> = 3.5V P <sub>in</sub> = 20mW	2		W	
η <sub>T</sub>	Total efficiency		40		%	
2f <sub>o</sub>	2nd. harmonic			- 25		dBc
ρ <sub>in</sub>	Input VSWR			4		-
-	Stability	Z <sub>G</sub> = 50Ω, V <sub>DD</sub> = 4 to 8V, Load VSWR < 4 : 1	No parasitic oscillation		-	
-	Load VSWR tolerance	V <sub>DD</sub> = 9V, P <sub>in</sub> = 20mW, P <sub>o</sub> = 2W(V <sub>GG</sub> Adjust), Z <sub>L</sub> = 20 : 1	No degradation or destroy		-	

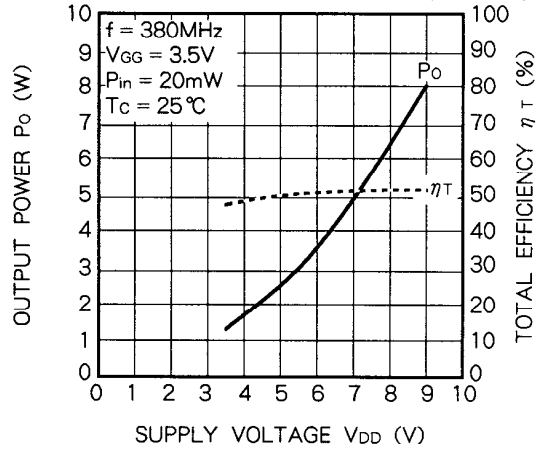
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

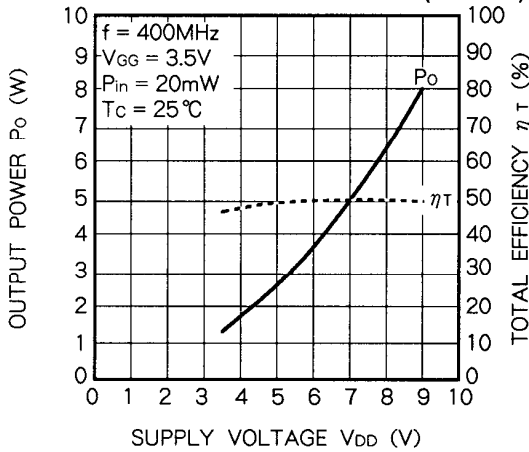
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS (TYPICAL)



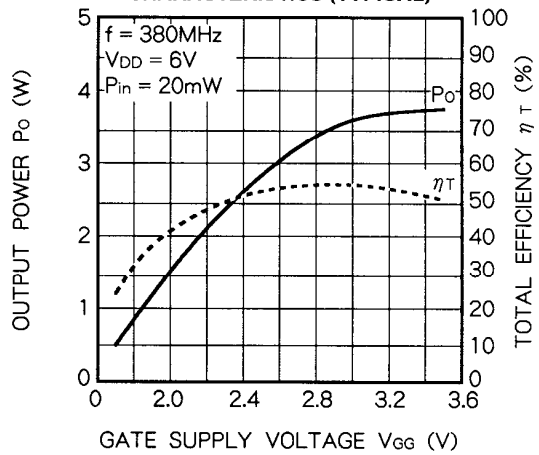
OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)



OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)



OUTPUT POWER, TOTAL EFFICIENCY VS. GATE SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)

