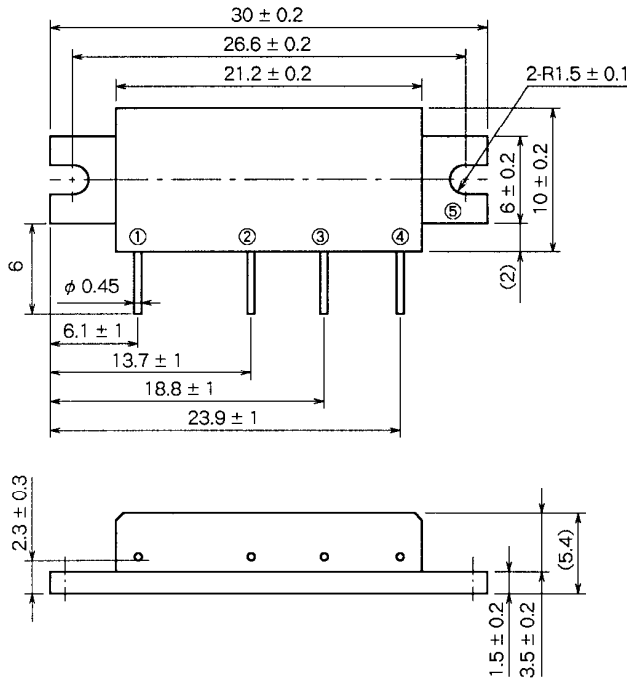


# M68710SL

350-380MHz, 6V, 2W FM PORTABLE RADIO

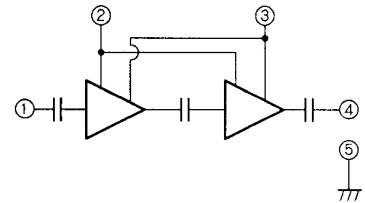
## OUTLINE DRAWING

Dimensions in mm



H46

## BLOCK DIAGRAM



PIN :

①Pin : 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	9	V
V <sub>GG</sub>	Gate bias voltage		4	V
P <sub>in</sub>	Input power	f = 350 to 380MHz, Z <sub>G</sub> = Z <sub>L</sub> = 50Ω	30	mW
P <sub>o</sub>	Output power	f = 350 to 380MHz, 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 = 350 to 380MHz, 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.

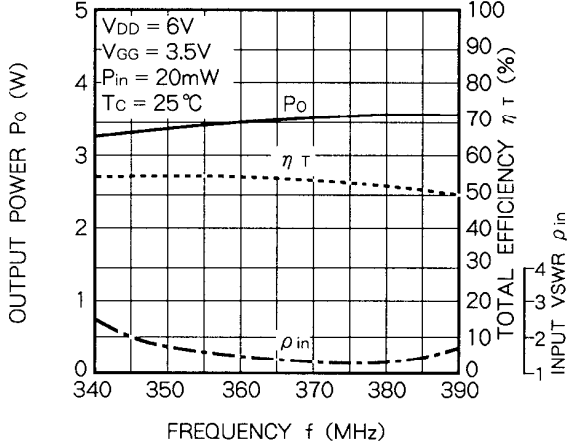
## ELECTRICAL CHARACTERISTICS (T<sub>C</sub> = 25 °C, Z<sub>G</sub> = Z<sub>L</sub> = 50Ω, unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit	
			Min	Max		
f	Frequency range		350	380	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		-	

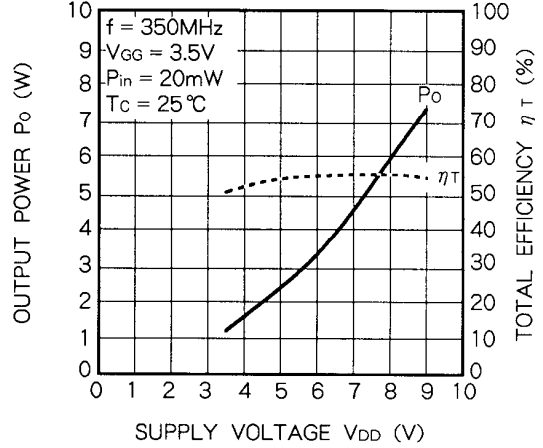
Note : Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

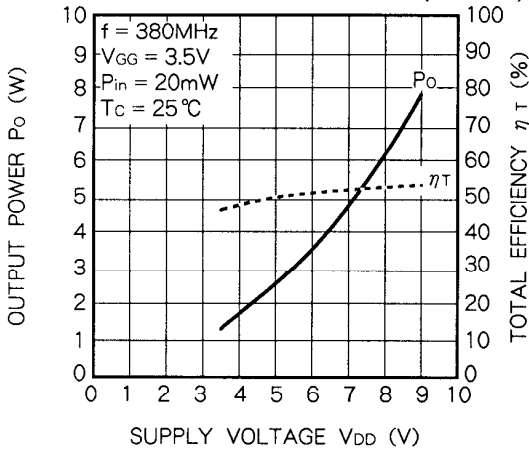
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS (TYPICAL)



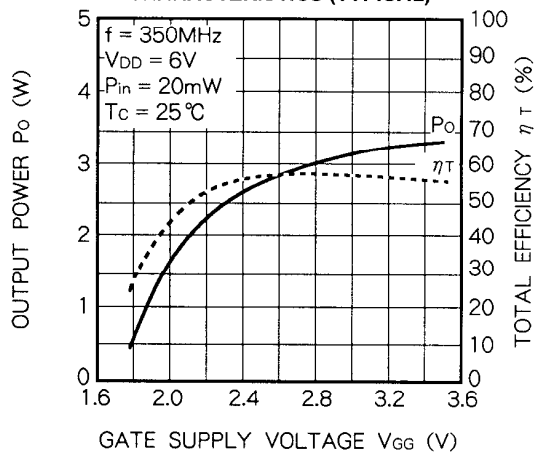
OUTPUT POWER, TOTAL EFFICIENCY VS. SUPPLY VOLTAGE CHARACTERISTICS (TYPICAL)



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)

