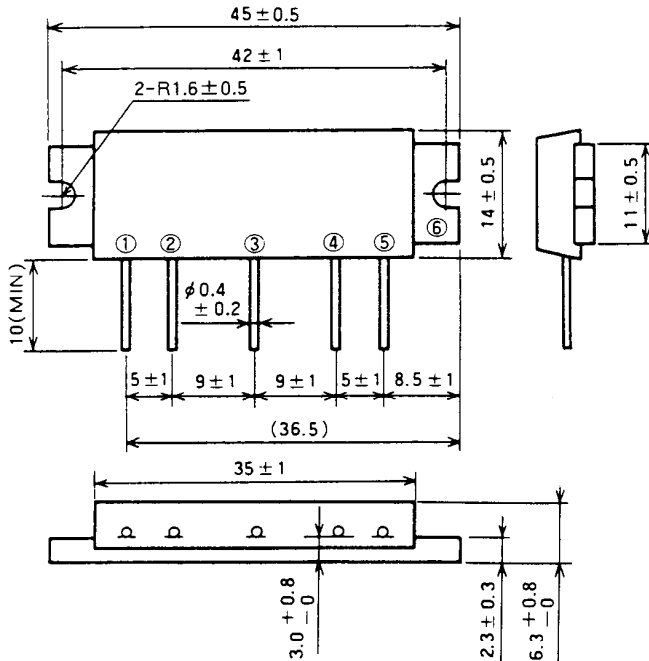


# M57721

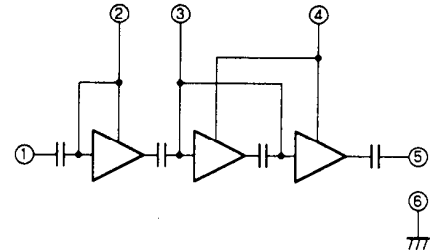
450-512MHz, 12.5V, 7W, FM PORTABLE RADIO

### OUTLINE DRAWING

Dimensions in mm



### BLOCK DIAGRAM



PIN :

- ① Pin : RF INPUT
- ② VCC1 : 1st. DC SUPPLY
- ③ VBB : BASE BIAS SUPPLY
- ④ VCC2 : 2nd. DC SUPPLY
- ⑤ Po : RF OUTPUT
- ⑥ GND : FIN

### ABSOLUTE MAXIMUM RATINGS (Tc = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply voltage		16	V
VBB	Base bias		6	V
Icc	Total current		4	A
P <sub>in(max)</sub>	Input power	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω	20	mW
P <sub>O(max)</sub>	Output power	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω	10	W
T <sub>C(OP)</sub>	Operation case temperature		- 30 to 110	°C
T <sub>stg</sub>	Storage temperature		- 40 to 110	°C

Note. Above parameters are guaranteed independently.

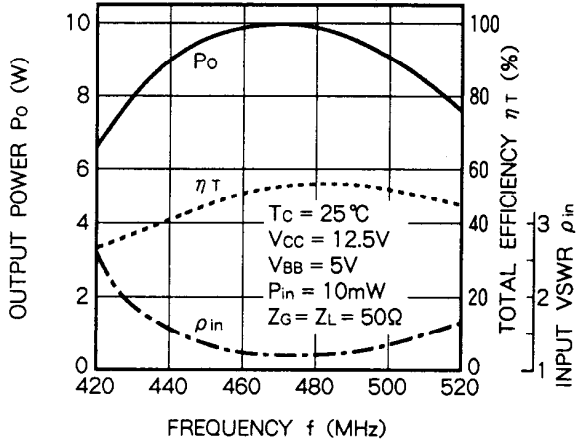
### ELECTRICAL CHARACTERISTICS (Tc = 25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range	Vcc1 = Vcc2 = 12.5V VBB = 5V P <sub>in</sub> = 10mW Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω	450	512	MHz
P <sub>o</sub>	Output power		7		W
η <sub>T</sub>	Total efficiency		40		%
2fo	2nd. harmonic			- 30	dBc
3fo	3rd. harmonic			- 35	dBc
ρ <sub>in</sub>	Input VSWR			2.5	-
-	Load VSWR tolerance	Vcc1 = Vcc2 = 13.2V, VBB = 5V P <sub>o</sub> = 7W (P <sub>in</sub> : controlled) Load VSWR ≥ 20 : 1 (All phase) Z <sub>G</sub> = 50Ω	No degradation or destroy		-

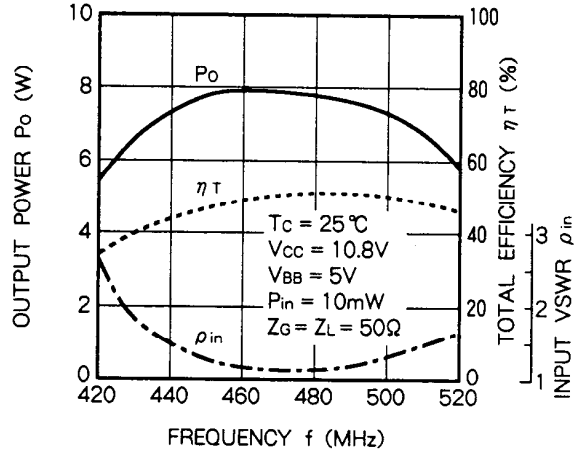
Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

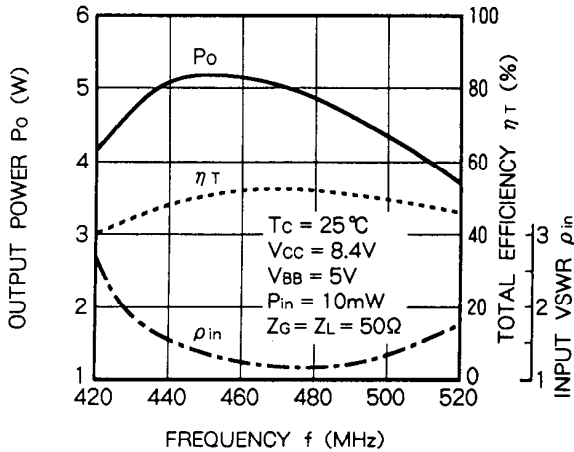
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



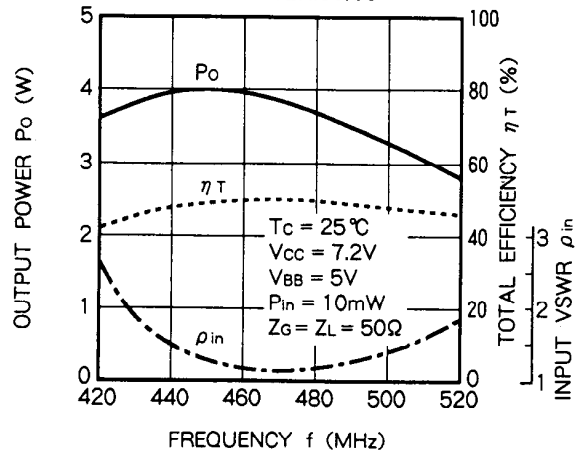
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



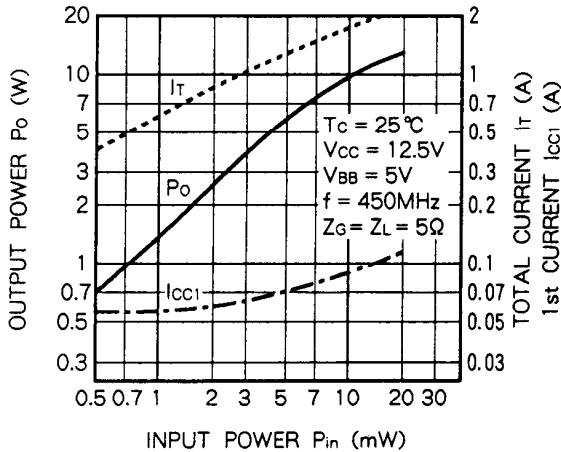
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS

