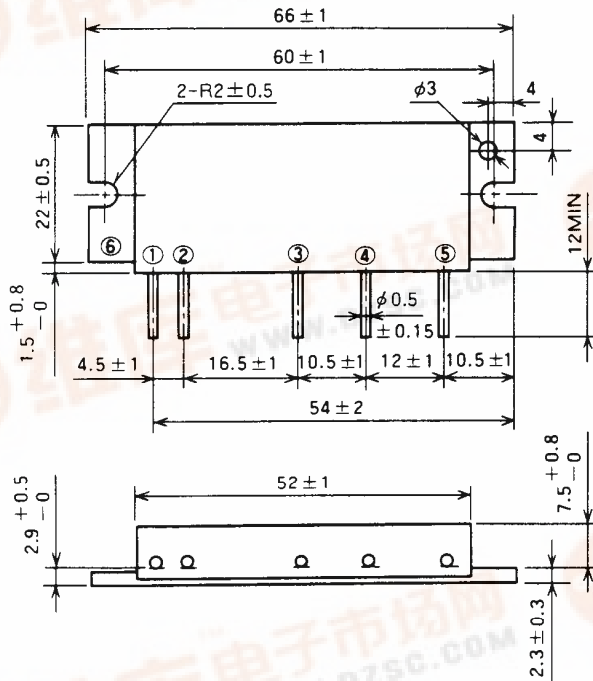


# M67712

220-225MHz, 12.5V, 30W, SSB MOBILE RADIO

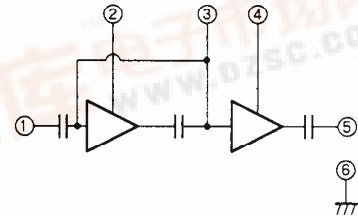
## OUTLINE DRAWING

Dimensions in mm



H3

## 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 (T<sub>c</sub> = 25°C unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>CC</sub>	Supply voltage		17	V
V <sub>BB</sub>	Base bias		10	V
I <sub>CC</sub>	Total current		7	A
P <sub>in(max)</sub>	Input power	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω, V <sub>CC1</sub> ≤ 12.5V	0.6	W
P <sub>o(max)</sub>	Output power	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω	40	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 (T<sub>c</sub> = 25°C unless otherwise noted)

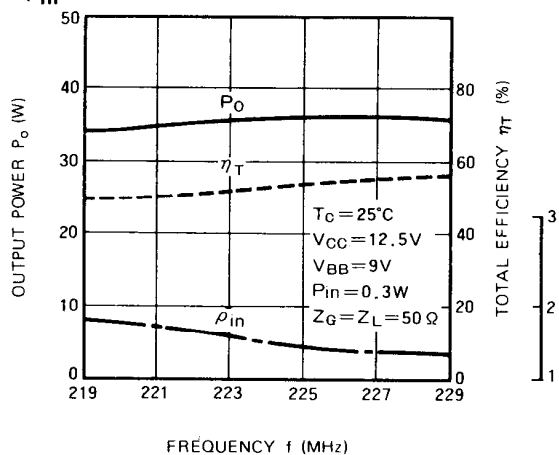
Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		220	225	MHz
P <sub>o</sub>	Output power		30		W
η <sub>T</sub>	Total efficiency	P <sub>in</sub> = 0.3W V <sub>CC</sub> = 12.5V, V <sub>BB</sub> = 9V	43		%
2f <sub>o</sub>	2nd. harmonic	Z <sub>G</sub> = Z <sub>L</sub> = 50 Ω		- 30	dBc
3f <sub>o</sub>	3rd. harmonic			- 35	dBc
ρ <sub>in</sub>	Input VSWR			2.8	-
-	Load VSWR tolerance	V <sub>CC</sub> = 15.2V, V <sub>BB</sub> = 9V P <sub>o</sub> = 30W (P <sub>in</sub> : controlled) Load VSWR=20:1 (All phase), 2sec. Z <sub>G</sub> = 50 Ω	No degradation or destroy		-

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

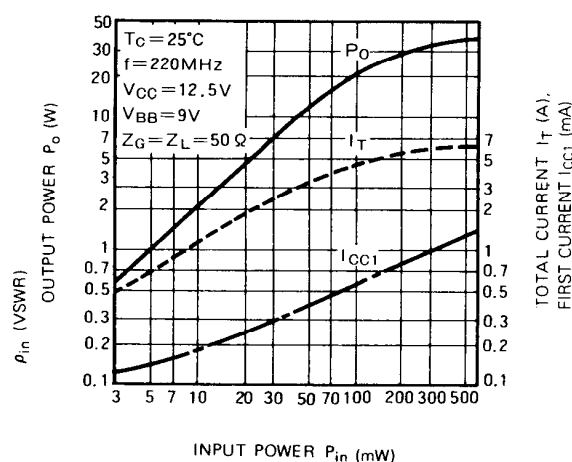


TYPICAL PERFORMANCE DATA

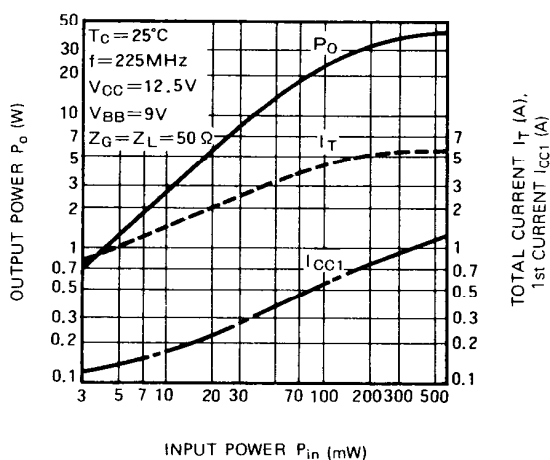
OUTPUT POWER, TOTAL EFFICIENCY,  $\rho_{in}$  VS. FREQUENCY CHARACTERISTICS



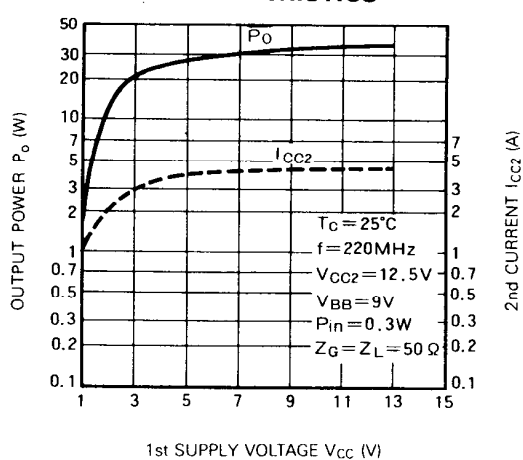
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



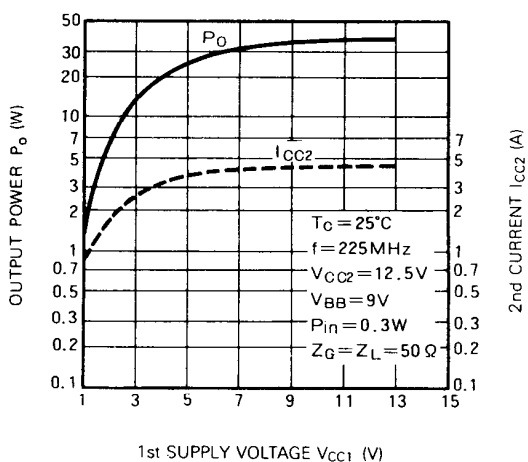
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



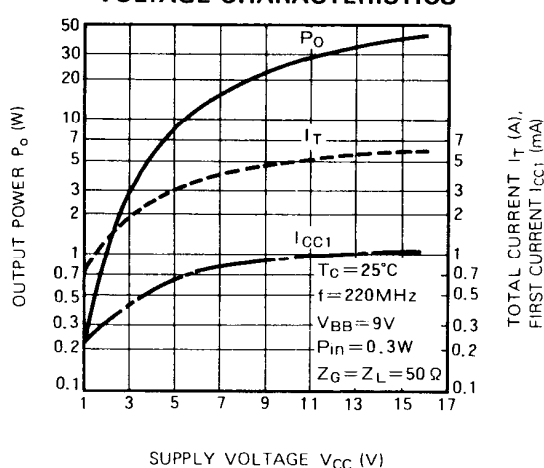
OUTPUT POWER, 2nd CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



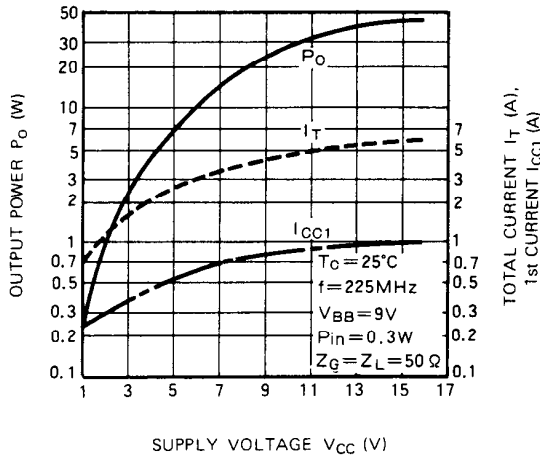
OUTPUT POWER, 2nd CURRENT VS. 1st SUPPLY VOLTAGE CHARACTERISTICS



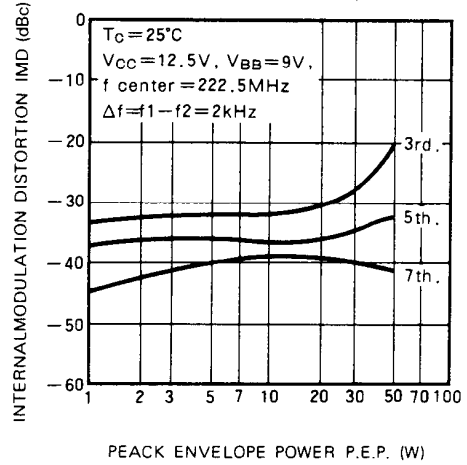
OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, TOTAL CURRENT,  
1st CURRENT VS. SUPPLY  
VOLTAGE CHARACTERISTICS



INTERNAL MODULATION DISTORTION  
VS. PEACK ENVELOPE POWER  
CHARACTERISTICS



2nd, 3rd HARMONIC VS. FREQUENCY  
CHARACTERISTICS

