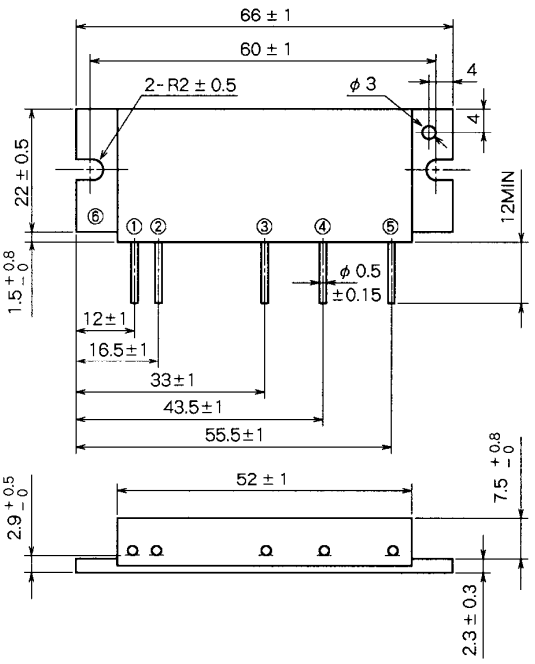
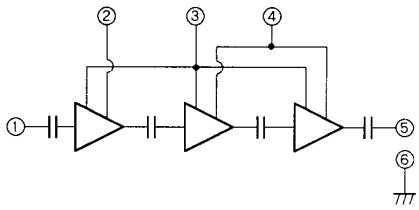
M57762

1240-1300MHz, 12.5V, 18W, SSB MOBILE RADIO

OUTLINE DRAWING Dimensions in mm



BLOCK DIAGRAM



PIN :
①Pin : RF INPUT
②Vcc1 : 1st. DC SUPPLY
③VBB : BASE BIAS SUPPLY
④Vcc2 : 2nd. DC SUPPLY
⑤Po : RF OUTPUT
⑥GND : FIN

ABSOLUTE MAXIMUM RATINGS (T_C = 25℃ unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V_{CC}	Supply voltage		17	V
V_{BB}	Base bias		10	V
I_{CC}	Total current		8	A
$P_{in(max)}$	Input power	V_{CC1}=12.5V, V_{BB}=9V, Z_G=Z_L=50Ω	2	W
$P_{O(max)}$	Output power	Z_G = Z_L = 50 Ω	25	W
$T_{C(OP)}$	Operation case temperature		− 30 to 110	℃
T_{stg}	Storage temperature		− 40 to 110	℃

Note. Above parameters are guaranteed independently.

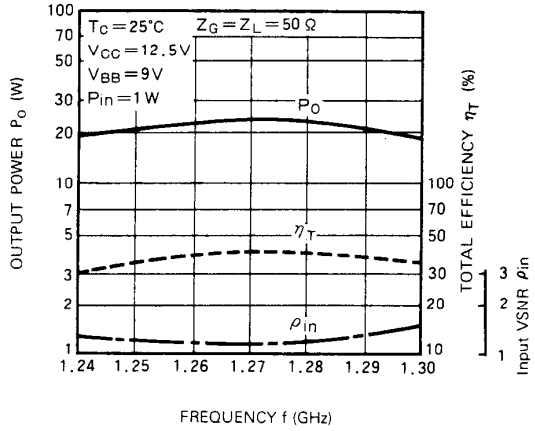
ELECTRICAL CHARACTERISTICS (T_C = 25℃ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range	V_{CC1} = V_{CC2} = 12.5V V_{BB} = 9V P_{in} = 1W Z_G = Z_L = 50 Ω	1240	1300	MHz
P_O	Output power		18		W
η_T	Total efficiency		28		%
2fo	2nd. harmonic			− 45	dBc
ρ_{in}	Input VSWR			2.0	−
I_{BB}	Base bias current			500	mA
G_P	Linear power gain	V_{CC1} = V_{CC2} = 12.5V, V_{BB} = 9V, P_{in} = 10dBm, Z_G = Z_L = 50Ω	13		dB
IMD_3	3rd. intermodulation distortion	V_{CC1}=V_{CC2}=12.5V, V_{BB}=9V, Δf=10kHz, $P_{O(PEP)}$ ≦ 14W, Z_G=Z_L=50Ω		− 24	dBc
IMD_5	5th. intermodulation distortion			− 31	dBc
−	Load VSWR tolerance	V_{CC1} = V_{CC2} = 15.2V, V_{BB} = 9V, P_O = 18W(P_{in} : controlled), Z_G=50Ω Load VSWR − 16 : 1(All phase).	No degradation or destroy		−

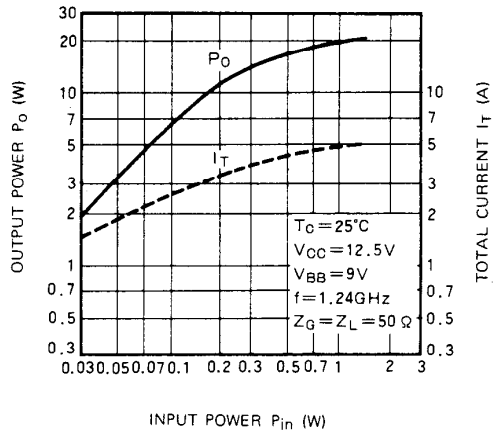
Note. Above parameters, ratings, limits and conditions are subject to change.

TYPICAL PERFORMANCE DATA

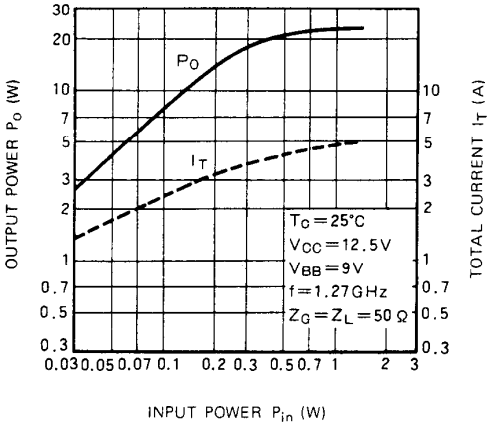
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY CHARACTERISTICS



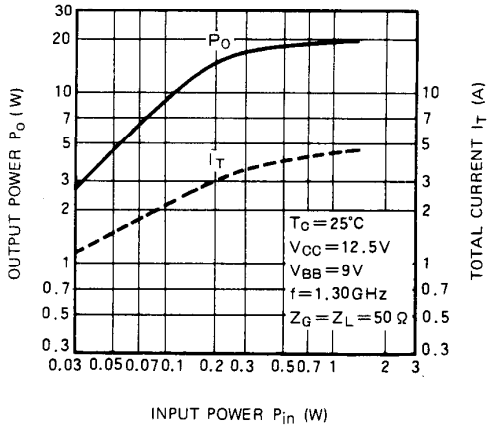
OUTPUT POWER, TOTAL CURRENT, VS. INPUT POWER CHARACTERISTICS



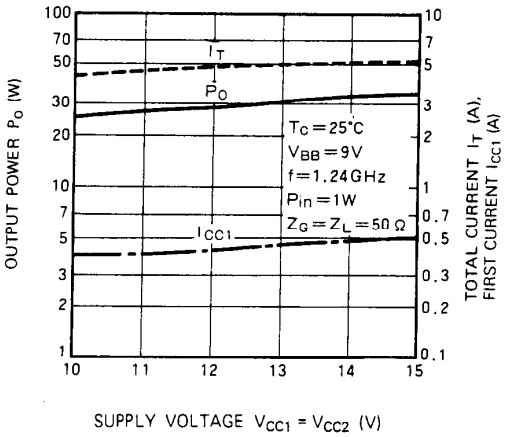
OUTPUT POWER, TOTAL CURRENT, VS. INPUT POWER CHARACTERISTICS



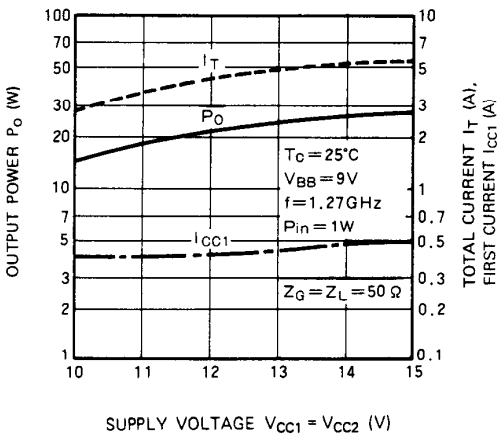
OUTPUT POWER, TOTAL CURRENT, VS. INPUT POWER CHARACTERISTICS



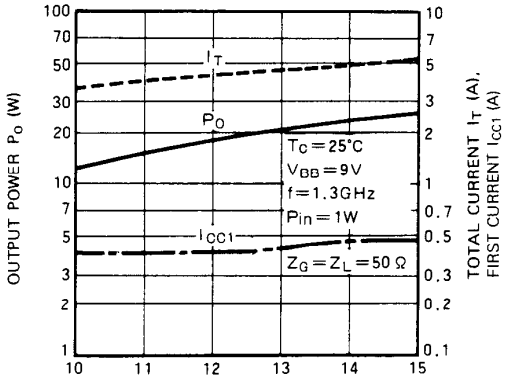
OUTPUT POWER, TOTAL CURRENT, FIRST CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



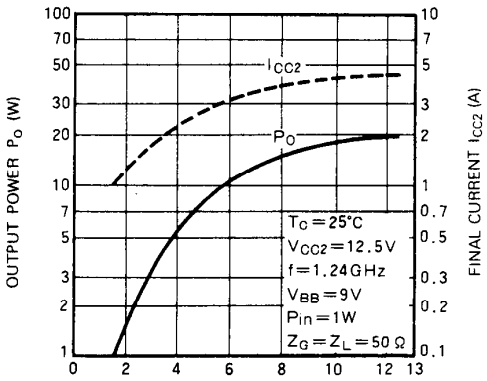
OUTPUT POWER, TOTAL CURRENT, FIRST CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



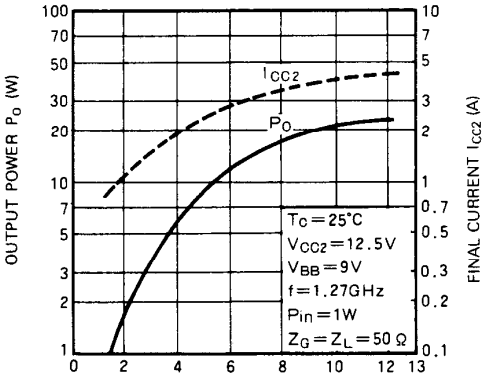
OUTPUT POWER, TOTAL CURRENT, FIRST CURRENT VS. SUPPLY VOLTAGE CHARACTERISTICS



OUTPUT POWER, FINAL CURRENT VS. FIRST VOLTAGE CHARACTERISTICS



OUTPUT POWER, FINAL CURRENT VS. FIRST VOLTAGE CHARACTERISTICS



OUTPUT POWER, FINAL CURRENT VS. FIRST CURRENT CHARACTERISTICS