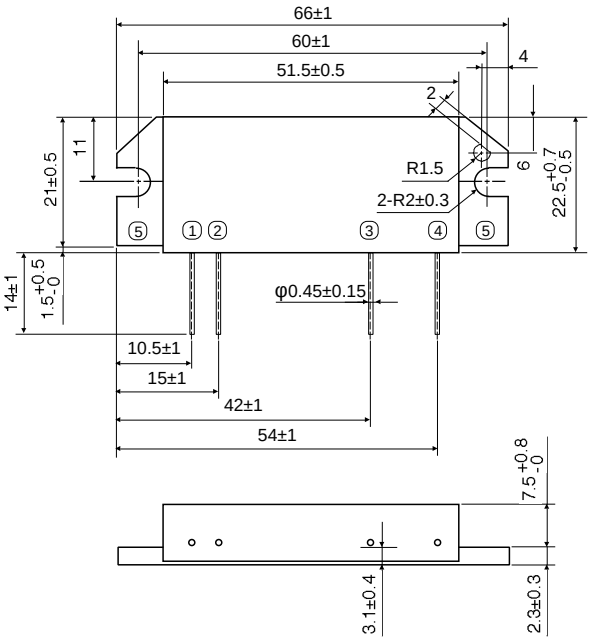
M68750

144-148MHz, 12.5V, 27W, FM MOBILE RADIO

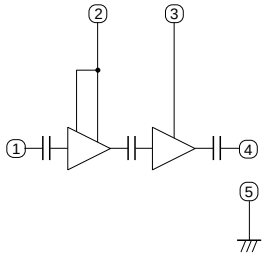
OUTLINE DRAWING

Dimensions in mm



H2

BLOCK DIAGRAM



PIN:
①Pin : RF INPUT
②VCC1: 1st. DC SUPPLY
③VCC2: 2nd. DC SUPPLY
④PO : RF OUTPUT
⑤GND: FIN

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

Symbol	Parameter	Conditions	Ratings	Unit
V_{CC}	Supply voltage	Z_G=Z_L=50Ω	17	V
I_{CC}	Total current	Z_G=Z_L=50Ω	7	A
P_{in} (max)	Input power	Z_G=Z_L=50Ω, V_{CC1}≤12.5V	400	mW
P_O (max)	Output power	Z_G=Z_L=50Ω, V_{CC1}≤12.5V	40	W
T_C (OP)	Operation case temperature	Z_G=Z_L=50Ω, V_{CC1}≤12.5V	-30 to +110	°C
T_{stg}	Storage temperature		-40 to +110	°C

Note. Above parameters are guaranteed independently.

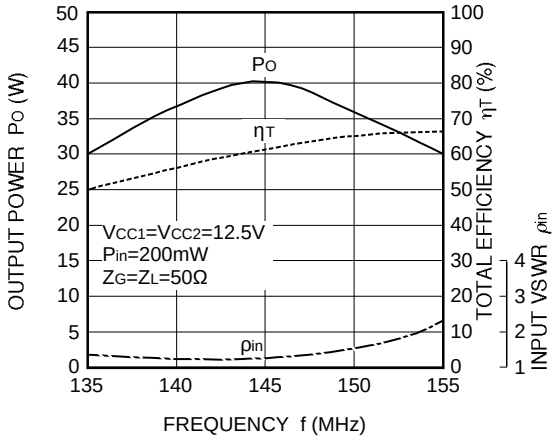
ELECTRICAL CHARACTERISTICS (Tc=25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		144	148	MHz
P_O	Output power	V_{CC1}=V_{CC2}=12.5V, P_{in}=200mW Z_G=Z_L=50Ω	27		W
η_T	Total efficiency		50		%
2f_O	2nd. harmonic			-25	dBc
3f_O	3rd. harmonic			-30	dBc
ρ_{in}	Input VSWR			2.8	-
-	Load VSWR tolerance	V_{CC1}=V_{CC2}=15.2V P_O=30W (P_{in}:controlled), Z_G=50Ω Load VSWR=20:1 (All phase)	No degradation or destroy		-

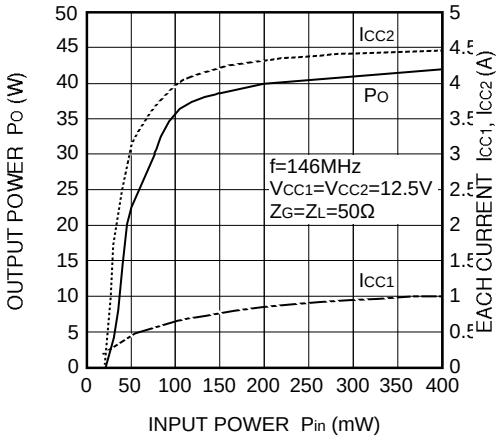
Note. Above parameters, ratings, limits and test conditions are subject to change.

TYPICAL PERFORMANCE DATA

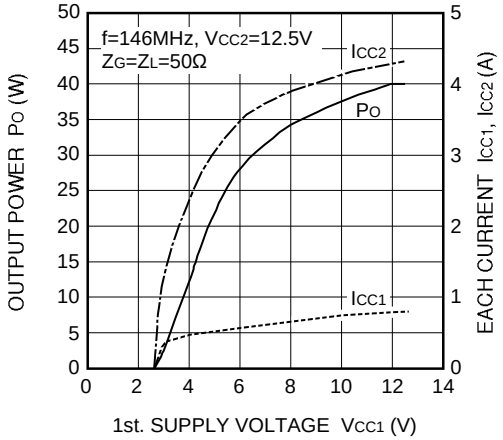
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY



OUTPUT POWER, EACH CURRENT VS. INPUT POWER



OUTPUT POWER, EACH CURRENT VS. 1st. SUPPLY VOLTAGE



OUTPUT POWER, 2nd. CURRENT VS. 2nd. SUPPLY VOLTAGE