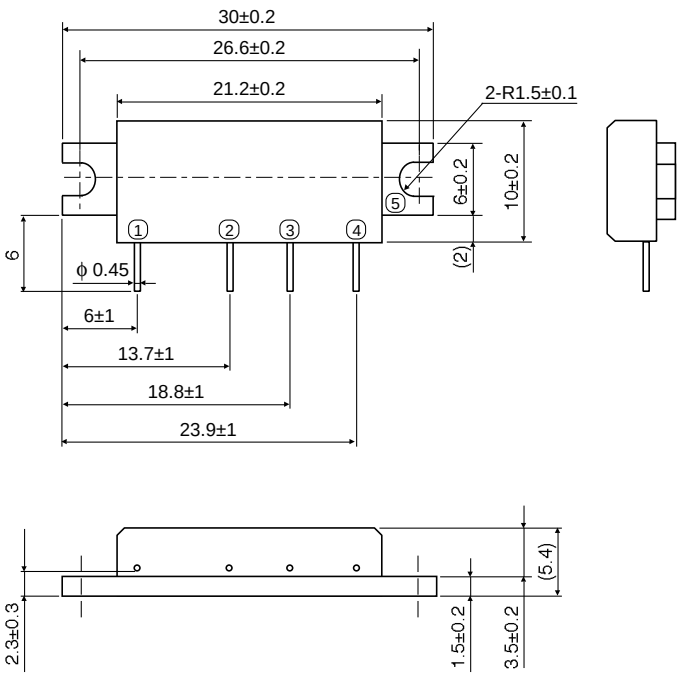
M68739M

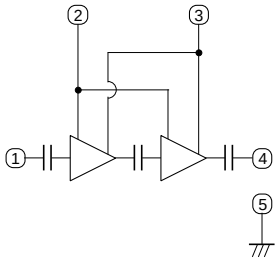
SILICON MOS FET POWER AMPLIFIER, 155-168MHz, 7W, FM PORTABLE RADIO

OUTLINE DRAWING

Dimensions in mm



BLOCK DIAGRAM



PIN:
①Pin : RF INPUT
②VGG : GATE BIAS SUPPLY
③VDD : DRAIN BIAS SUPPLY
④PO : RF OUTPUT
⑤GND: FIN

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

Symbol	Parameter	Conditions	Ratings	Unit
V_{DD}	Supply voltage	V_{GG}≤2.5V, Z_G=Z_L=50Ω	16	V
V_{GG}	Gate bias voltage		3	V
P_{in}	Input power	f=155-168MHz, Z_G=Z_L=50Ω	30	mW
P_O	Output power	f=155-168MHz, Z_G=Z_L=50Ω	10	W
$T_{C\ (OP)}$	Operation case temperature	f=155-168MHz, Z_G=Z_L=50Ω	-30 to +100	°C
T_{stg}	Storage temperature		-40 to +110	°C

Note. Above parameters are guaranteed independently.

ELECTRICAL CHARACTERISTICS (Tc=25°C, Z_G=Z_L=50Ω unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		155	168	MHz
P_O	Output power	V_{DD}=9.6V, V_{GG}=2.5V, P_{in}=20mW	7		W
η_T	Total efficiency		50		%
$2f_O$	2nd. harmonic			-20	dBc
ρ_{in}	Input VSWR			4	-
-	Stability	Z_G=50Ω, V_{DD}=4.8-13.2V, Load VSWR <4:1	No parasitic oscillation		-
-	Load VSWR tolerance	V_{DD}=13.2V, P_{in}=20mW, P_O=7W (V_{GG} Adjust), Z_L=20:1	No degradation or destroy		-

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