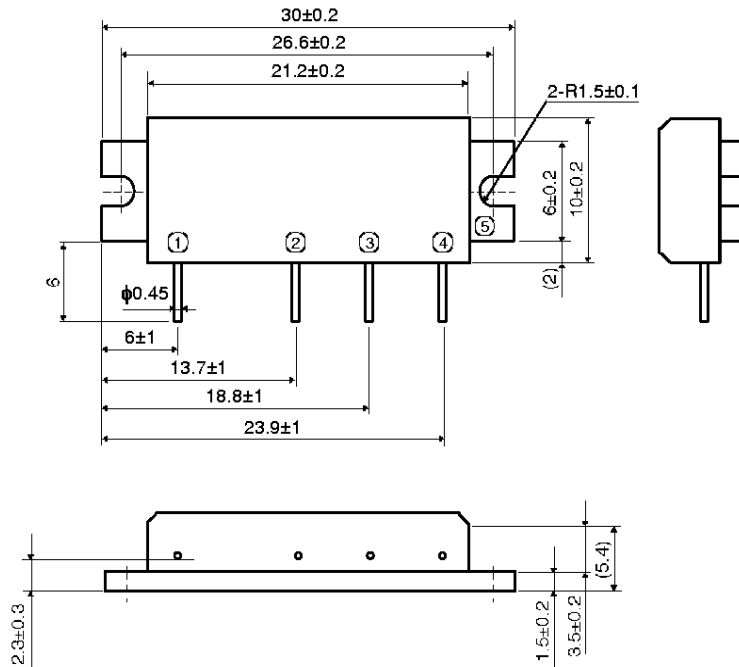


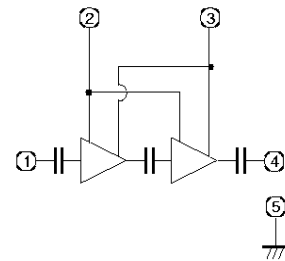
SILICON MOS FET POWER AMPLIFIER, 142-163MHz, 7W, FM PORTABLE RADIO

OUTLINE DRAWING

Dimensions in mm



BLOCK DIAGRAM



PIN:

- ① P_{in} : RF INPUT
- ② V_{GG} : GATE BIAS SUPPLY
- ③ V_{DD} : DRAIN BIAS SUPPLY
- ④ P_o : RF OUTPUT
- ⑤ GND: FIN

ABSOLUTE MAXIMUM RATINGS ($T_c=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V_{DD}	Supply voltage	$V_{GG} \leq 3.5\text{V}$, $Z_G = Z_L = 50\Omega$	9.2	V
V_{GG}	Gate bias voltage		4	V
P_{in}	Input power	$f=142\text{-}163\text{MHz}$, $Z_G = Z_L = 50\Omega$	70	mW
P_o	Output power	$f=142\text{-}163\text{MHz}$, $Z_G = Z_L = 50\Omega$	10	W
T_c (OP)	Operation case temperature	$f=142\text{-}163\text{MHz}$, $Z_G = Z_L = 50\Omega$	-30 to +100	$^\circ\text{C}$
T_{sig}	Strage temperature		-40 to +110	$^\circ\text{C}$

Note. Above parameters are guarateed independently.

ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$, $Z_G=Z_L=50\Omega$ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		142	163	MHz
P_o	Output power	$V_{DD}=7.2\text{V}$, $V_{GG}=3.5\text{V}$, $P_{in}=50\text{mW}$	7		W
η_T	Total efficiency		45		%
$2f_o$	2nd. harmonic			-20	dBc
p_{in}	Input VSWR			4	-
-	Stability	$Z_G=50\Omega$, $V_{DD}=4\text{-}9.2\text{V}$, Load VSWR<4:1	No parasitic oscillation		-
-	Load VSWR tolerance	$V_{DD}=9.2\text{V}$, $P_{in}=50\text{mW}$, $P_o=7\text{W}$ (V_{GG} adjust), $Z_L=20:1$	No degradation or destroy		-

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

SILICON MOS FET POWER AMPLIFIER, 142-163MHz, 7W, FM PORTABLE RADIO

TYPICAL PERFORMANCE DATA

