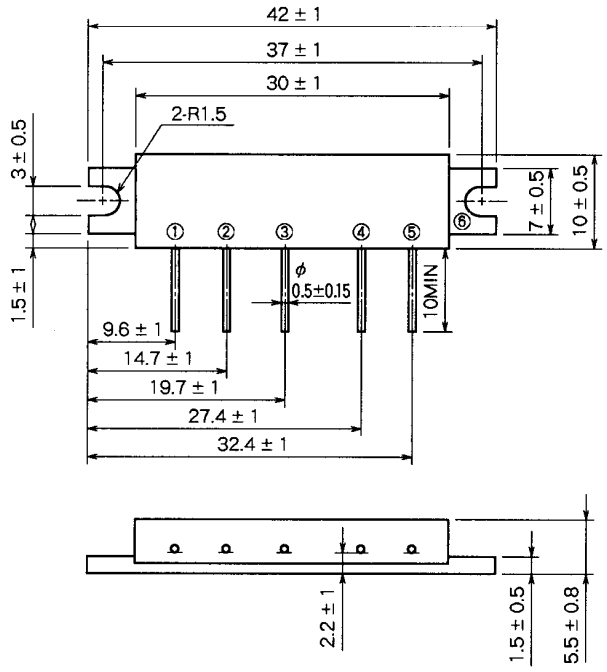
MITSUBISHI RF POWER MODULE

M67749H

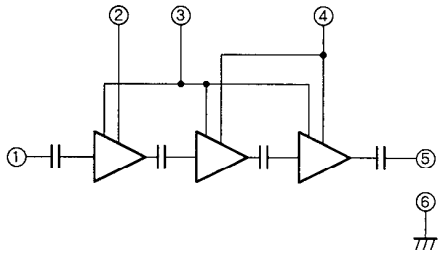
440-470MHz, 12.5V, 7W, FM PORTABLE RADIO

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 (Tc = 25℃ unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply voltage	VBB ≦ 5V	15	V
VBB	Base bias	Vcc ≦ 12.5V	5.5	V
Icc	Total current		4	A
Pin(max)	Input power	ZG = ZL = 50 Ω, Vcc1 ≦ 12.5V	40	mW
Po(max)	Output power	ZG = ZL = 50 Ω	10	W
Tc(OP)	Operation case temperature		− 30 to 110	℃
Tstg	Storage temperature		− 40 to 110	℃

Note. Above parameters are guaranteed independently.

ELECTRICAL CHARACTERISTICS (Tc = 25℃ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits Min	Limits Max	Unit
f	Frequency range	Pin = 20mW VBB = 5V Vcc = 12.5V ZG = ZL = 50 Ω	440	470	MHz
Po	Output power		7		W
ηT	Total efficiency		38		%
2fo	2nd. harmonic			− 20	dBc
3fo	3rd. harmonic			− 25	dBc
ρin	Input VSWR			2.5	−
−	Load VSWR tolerance	Vcc2 = 13.2V, VBB = 5V, Pin = 20mW Po = 7W (Vcc1 : controlled) Load VSWR = 20 : 1 (All phase), ZG = 50Ω	No degradation or destroy		−

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