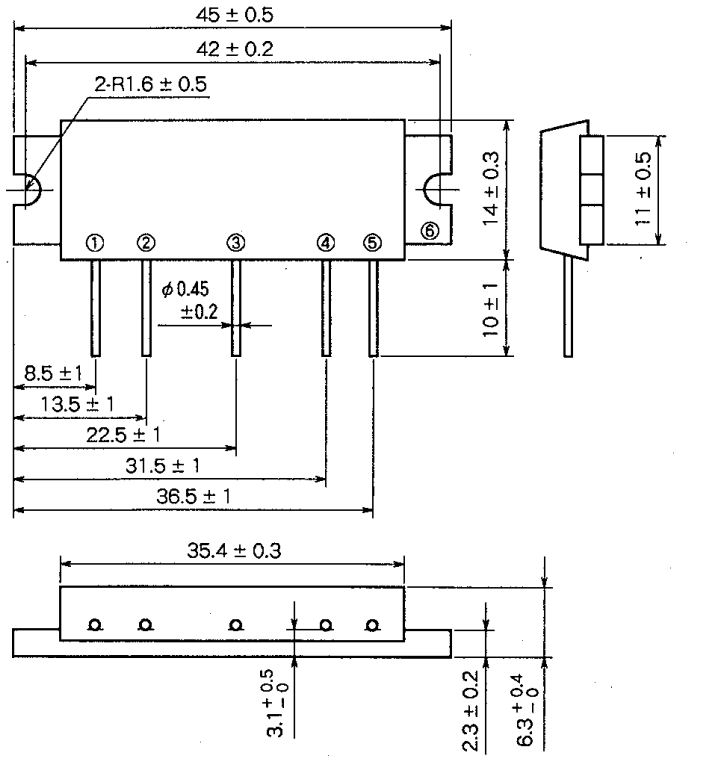
M57732

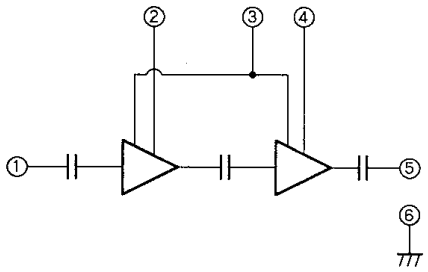
144-175MHz, 12.5V, 7W, FM PORTABLE RADIO

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		16	V
VBB	Base bias		6	V
Icc	Total current		4	A
Pin(max)	Input power	Vcc1 = 12.5V, ZG = ZL = 50 Ω	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.

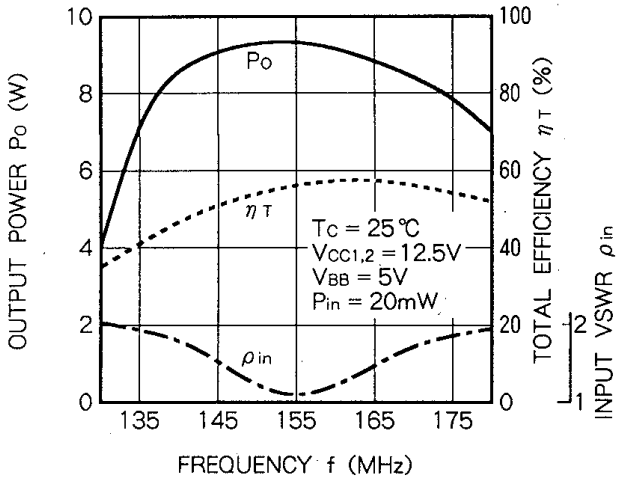
ELECTRICAL CHARACTERISTICS (Tc = 25℃ unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range	Vcc1 = Vcc2 = 12.5V VBB = 5V Pin = 20mW ZG = ZL = 50 Ω	144	175	MHz
Po	Output power		7		W
ηT	Total efficiency		40		%
2fo	2nd. harmonic			− 20	dBc
3fo	3rd. harmonic			− 30	dBc
ρin	Input VSWR			2.5	−
−	Load VSWR tolerance	Vcc1 = Vcc2 = 13.2V, VBB = 5V Po = 7W (Pin : controlled) Load VSWR = 20 : 1 (All phase) ZG = 50Ω	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



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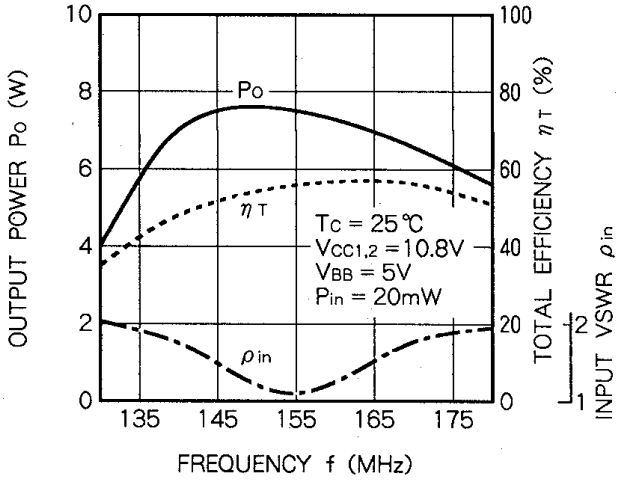

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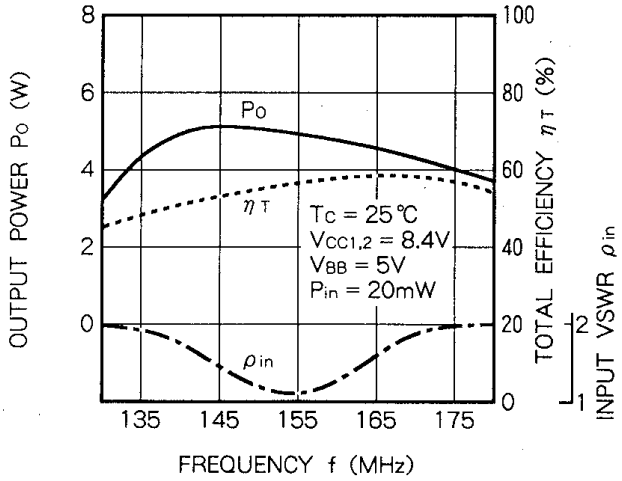
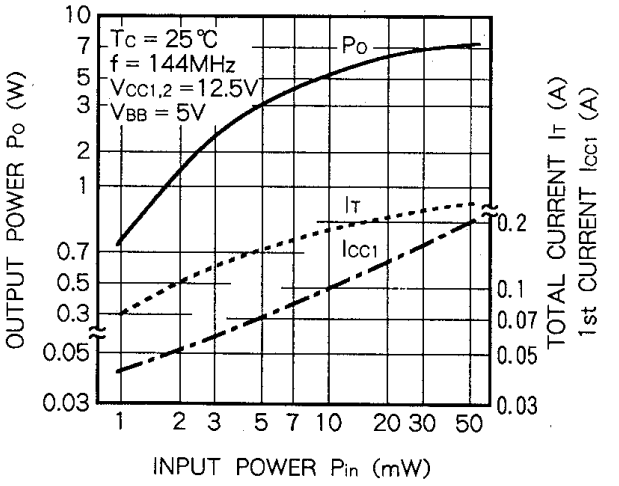
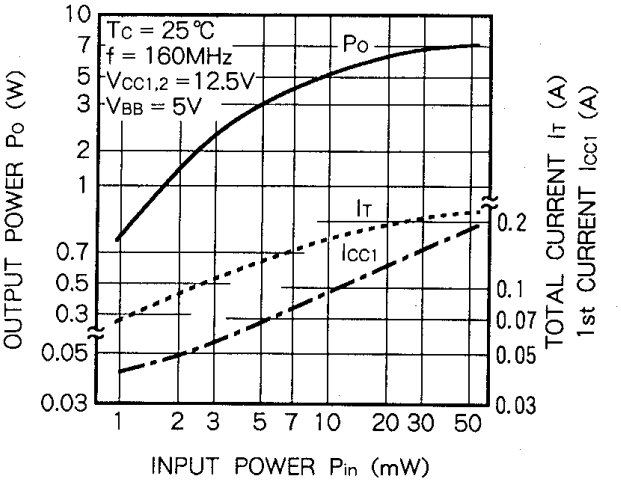


OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS



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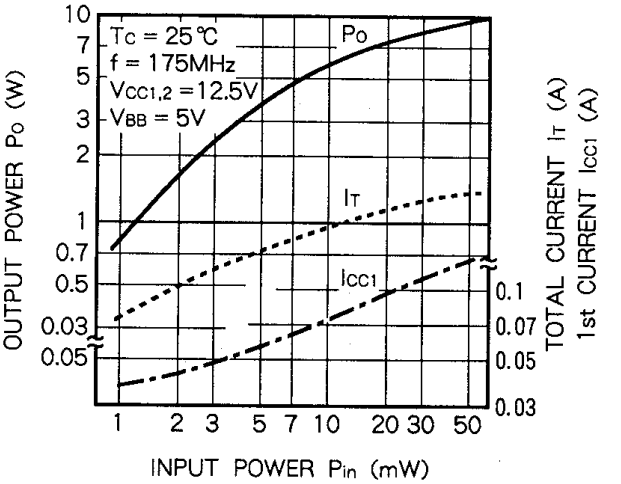

TYPICAL PERFORMANCE DATA

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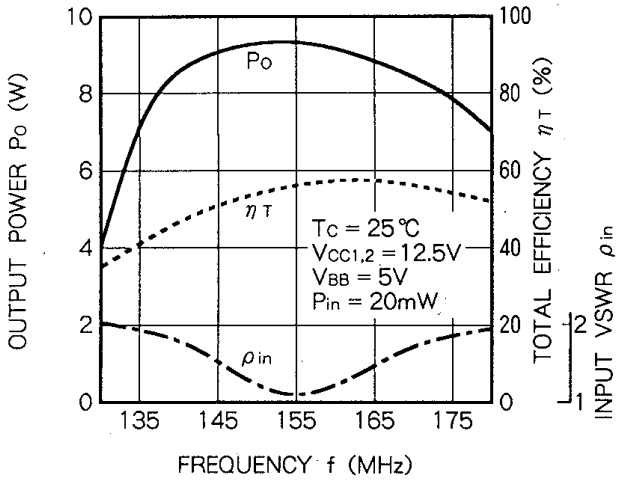

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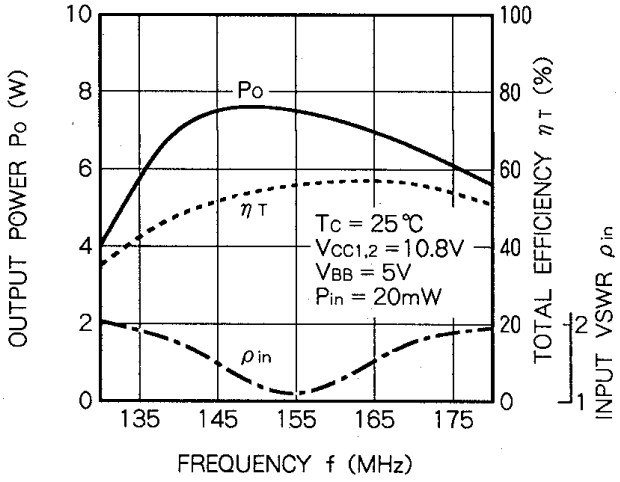

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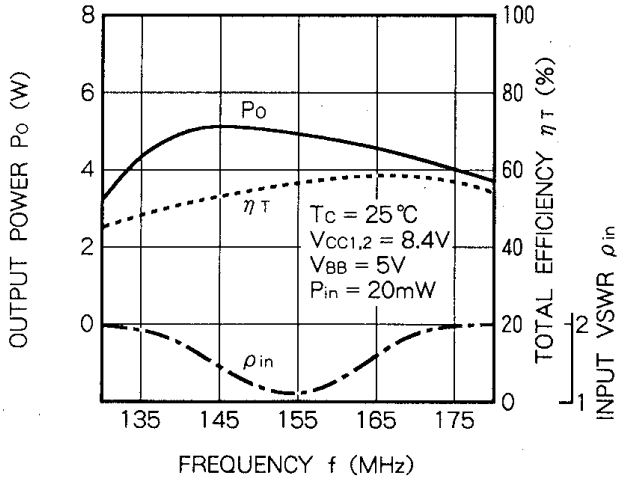

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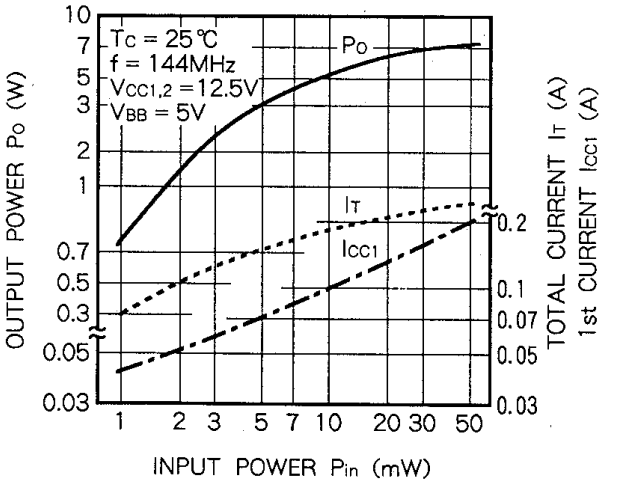

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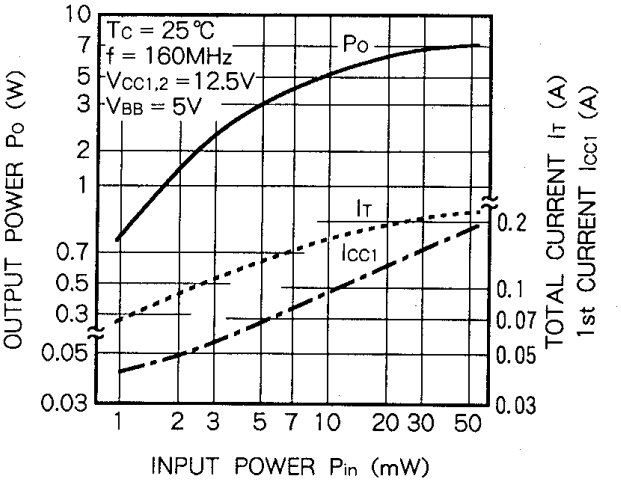

OUTPUT POWER, TOTAL CURRENT, 1st CURRENT VS. INPUT POWER CHARACTERISTICS