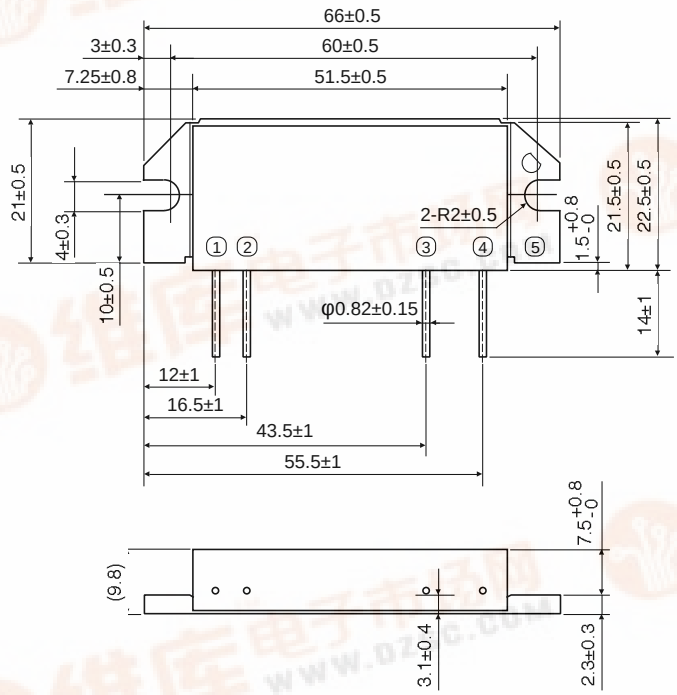
MITSUBISHI RF POWER MODULE

M68702H

150-175MHz, 12.5V, 60W, FM MOBILE RADIO

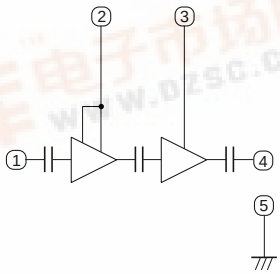
OUTLINE DRAWING

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
VCC	Supply voltage	ZG=ZL=50Ω	17	V
ICC	Total current	ZG=ZL=50Ω	20	A
Pin (max)	Input power	f=150-175MHz, ZG=ZL=50Ω, VCC1≤12.5V	600	mW
PO (max)	Output power	Ditto	75	W
TC (OP)	Operation case temperature	Ditto	-30 to +110	°C
Tstg	Storage temperature		-40 to +110	°C

Note. Above parameters are guaranteed independently.

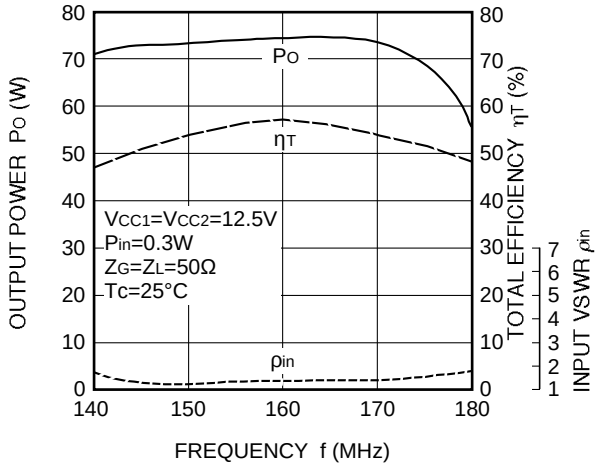
ELECTRICAL CHARACTERISTICS (Tc=25°C unless otherwise noted)

Symbol	Parameter	Test conditions	Limits		Unit
			Min	Max	
f	Frequency range		150	175	MHz
PO	Output power	VCC1=VCC2=12.5V, Pin=300mW, ZG=ZL=50Ω	60		W
ηT	Total efficiency		45		%
2fo	2nd. harmonic			-30	dBc
3fo	3rd. harmonic			-30	dBc
ρin	Input VSWR			3	-
-	Load VSWR tolerance	VCC1=VCC2=15.2V, PO=60W (Pin:controlled), ZG=50Ω, Load VSWR=8.8:1 (All phase)	No degradation or destroy		-

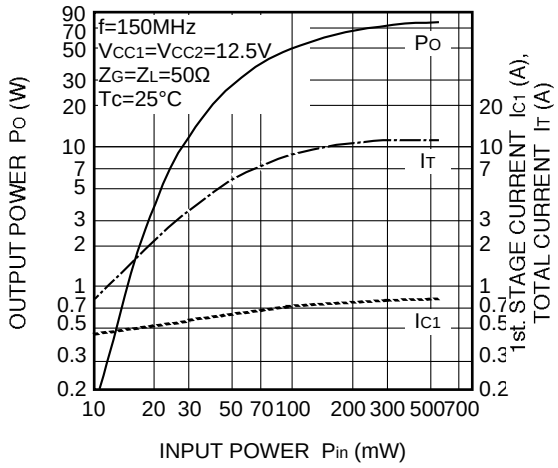
Note. Above parameters, ratings, limits and test conditions are subject to change.

TYPICAL PERFORMANCE DATA

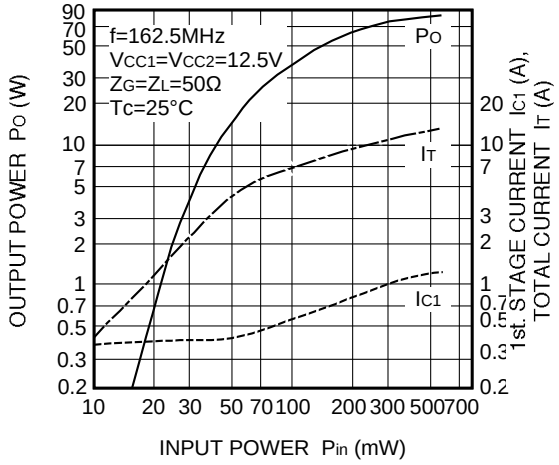
OUTPUT POWER, TOTAL EFFICIENCY, INPUT VSWR VS. FREQUENCY



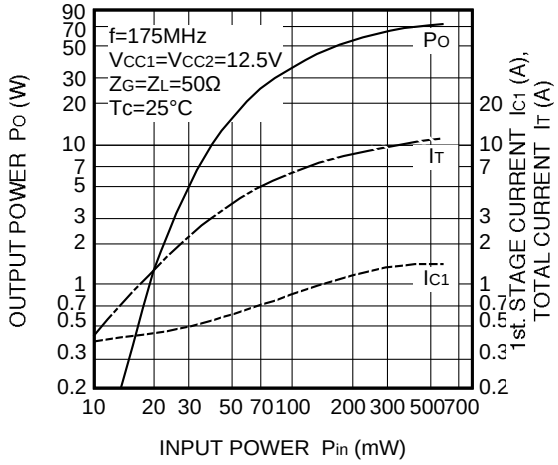
OUTPUT POWER, TOTAL CURRENT, 1st. STAGE CURRENT VS. INPUT POWER



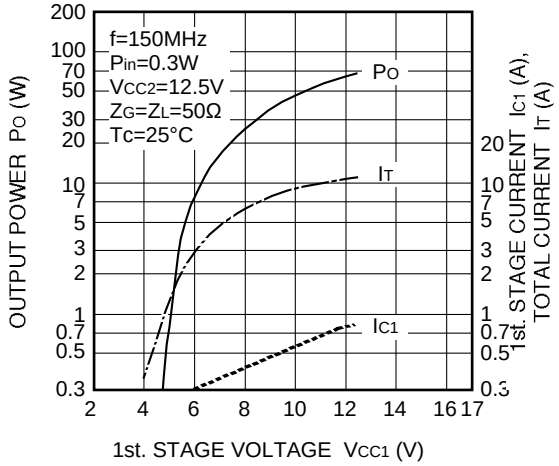
OUTPUT POWER, TOTAL CURRENT, 1st. STAGE CURRENT VS. INPUT POWER



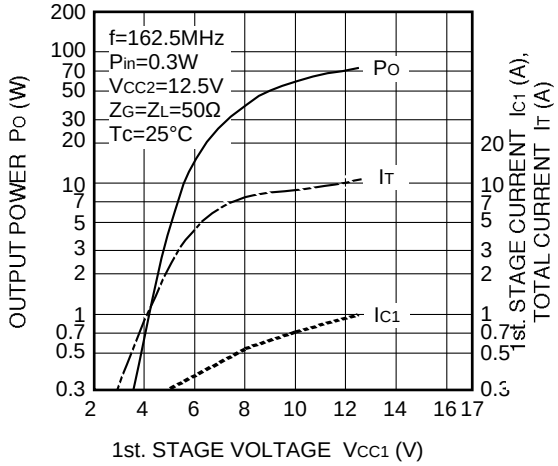
OUTPUT POWER, TOTAL CURRENT, 1st. STAGE CURRENT VS. INPUT POWER



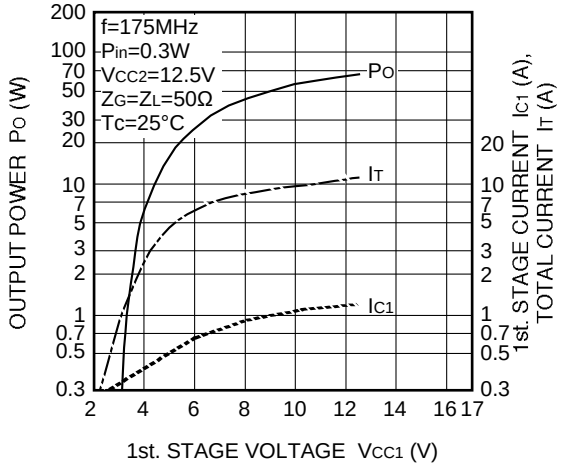
OUTPUT POWER, 1st. STAGE CURRENT, TOTAL CURRENT VS. 1st. STAGE VOLTAGE



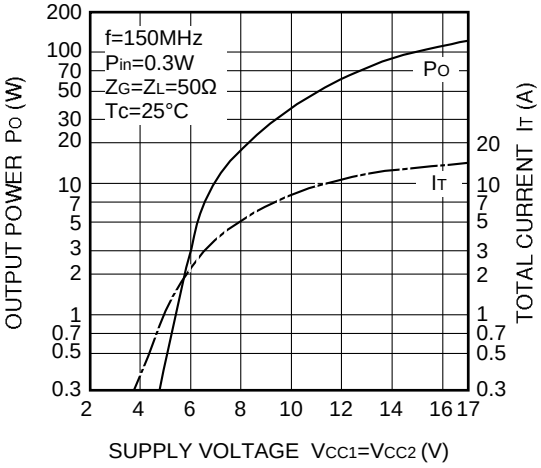
OUTPUT POWER, 1st. STAGE CURRENT, TOTAL CURRENT VS. 1st. STAGE VOLTAGE



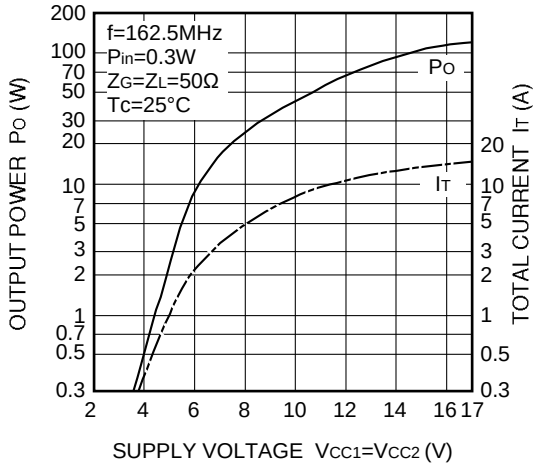
OUTPUT POWER, 1st. STAGE CURRENT, TOTAL CURRENT VS. 1st. STAGE VOLTAGE



OUTPUT POWER, TOTAL CURRENT VS. SUPPLY VOLTAGE



OUTPUT POWER, TOTAL CURRENT VS. SUPPLY VOLTAGE



OUTPUT POWER, TOTAL CURRENT VS. SUPPLY VOLTAGE