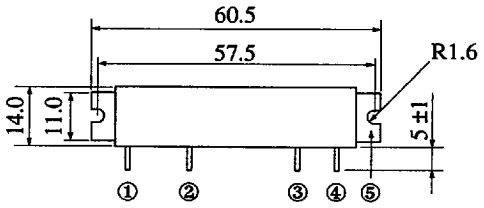
PF0012

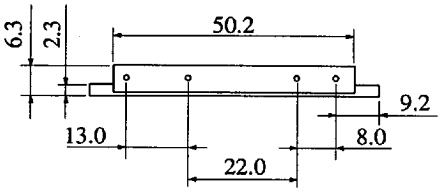
HIGH FREQUENCY POWER MOS FET MODULE

UHF Band 872-905 MHz

■ FEATURES

- Include Input and Output Matching Circuit
- Easy to Control Output Power
- Superior to Stability at Load Mismatching





① Pin
② V_{APC}
③ V_{DD}
④ Pout
⑤ CND
(Dimensions in mm)

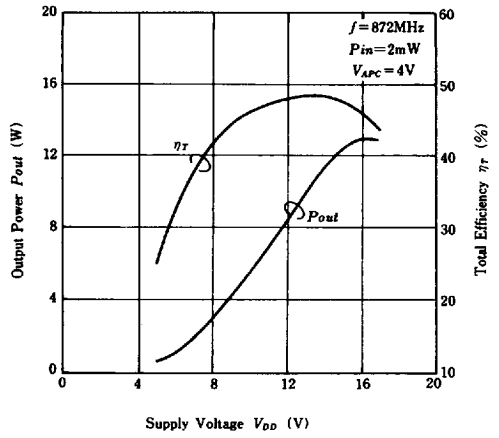
■ ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

Item	Symbol	Rating	Unit
Supply Voltage	V_{DD}	17	V
Maximum Circuit Current	I_D	3.0	A
APC Voltage	V_{APC}	8	V
Maximum Input Power	P_{in}	20	mW
Operating Maximum Case Temperature	$T_{c(op)}$	−40～+100	℃
Storage Temperature	T_{stg}	−45～+125	℃

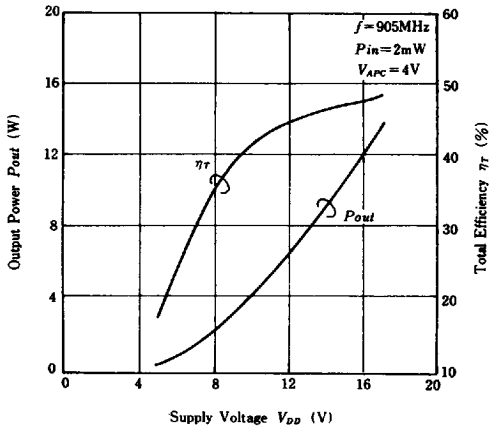
■ ELECTRICAL CHARACTERISTICS (Ta=25℃)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain Cutoff Current	I_{DS}	$V_{DD1}=V_{DD2}=17$V, $V_{APC}=0$	—	—	500	μA
Total Efficiency	η_T	f=872, 905MHz,	35	40	—	%
2nd Harmonic Distortion	2nd H.D.	P_{in}=2mW,	—	−50	−30	dB
3rd Harmonic Distortion	3rd H.D.	V_{DD}=12.5V,	—	−50	−30	dB
Input VSWR	VSWR(in)	P_{out}=6W(at APC Control)	—	1.5	3.0	—
Output VSWR	VSWR(out)	$Z_{in}=Z_{out}$=50Ω	—	1.5	—	—
Stability	—	V_{DD}=12.5V, P_{in}=2mW, f=872MHz, P_{out}=6W(at APC Control), R_g=50Ω, Output VSWR ≒ ∞ All Phase, t=20sec	No Parastic Oscillation			—

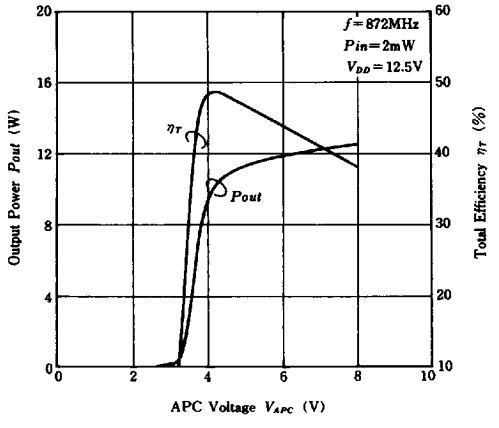
Pout, η_T VS. V_{DD}



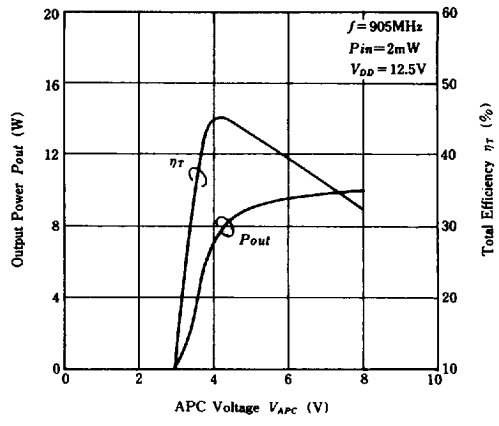
Pout, η_T VS. V_{DD}



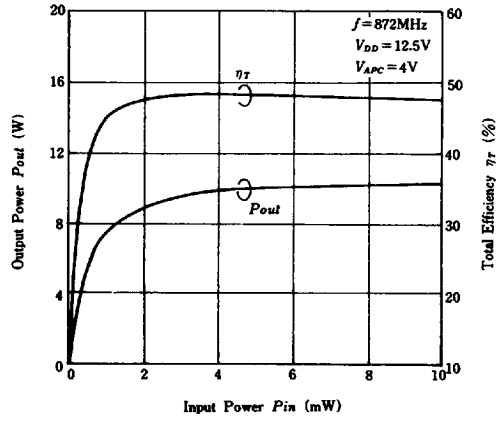
Pout, η_T VS. V_{APC}



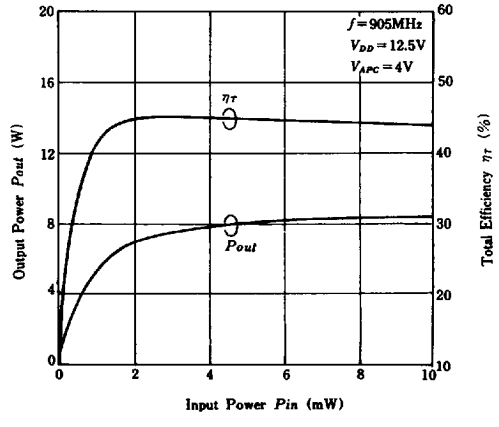
Pout, η_T VS. V_{APC}



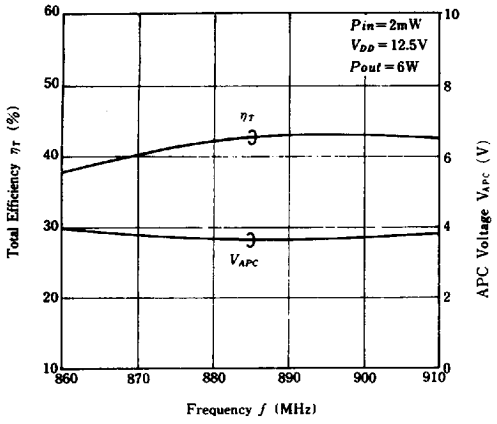
Pout, η_T VS. Pin



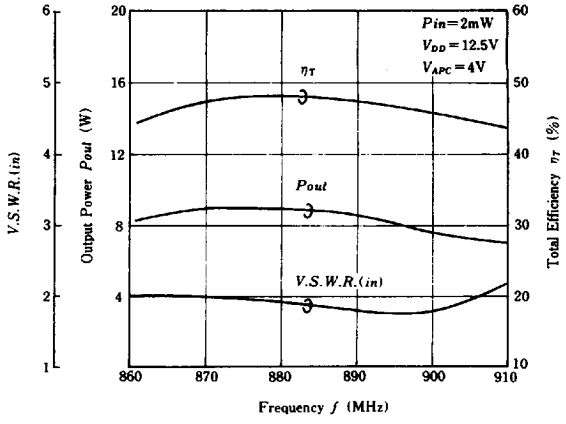
Pout, η_T VS. Pin



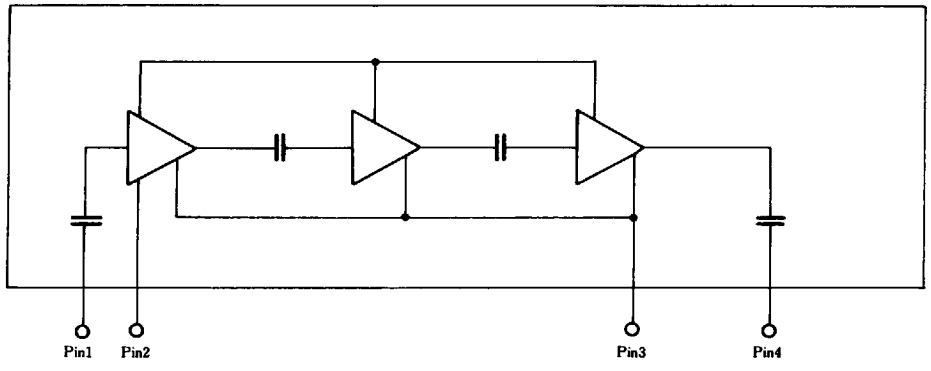
η_T, V_{APC} VS. FREQUENCY



η_T, Pout, VSWR VS. FREQUENCY



INTERNAL DIAGRAM



TEST SYSTEM DIAGRAM