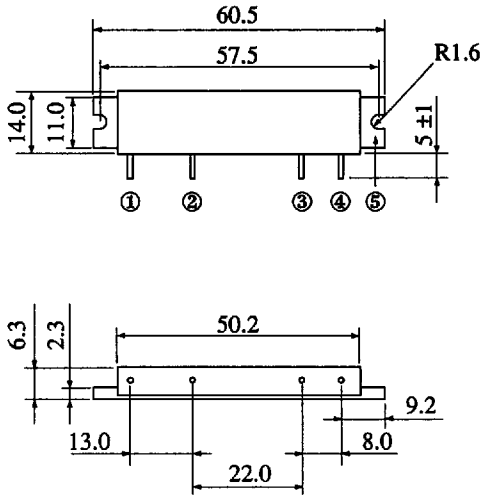
PF0010

HIGH FREQUENCY POWER MOS FET MODULE

UHF Band 820-850 MHz

■ FEATURES

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



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

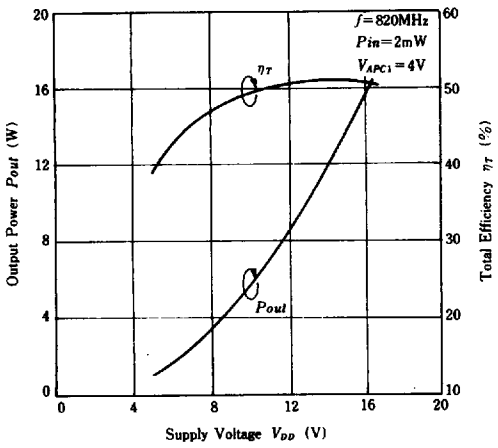
■ ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

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	℃

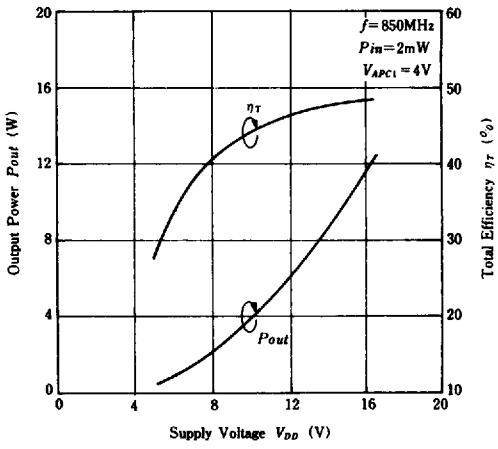
■ ELECTRICAL CHARACTERISTICS (Ta=25℃)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Drain Cutoff Current	I_{DS}	$V_{DD1}=V_{DD2}=17V$, $V_{APC}=0$	−	−	500	μA
Total Efficiency	η_T	f=820, 850MHz,	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=820MHz, P_{out}=6W(at APC Control), R_g=50Ω, Output VSWR ≒ ∞ All Phase, t=20sec	No Parastic Oscillation			−

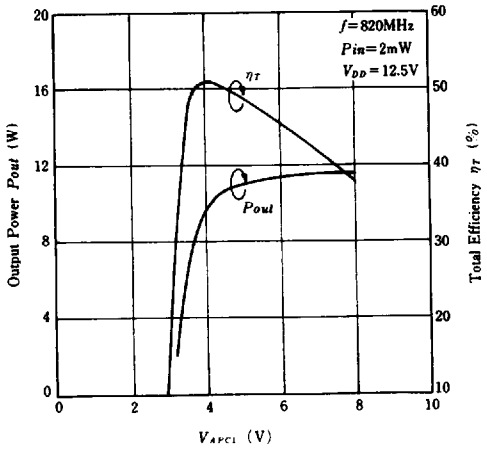
Pout, η_T VS. V_{DD}



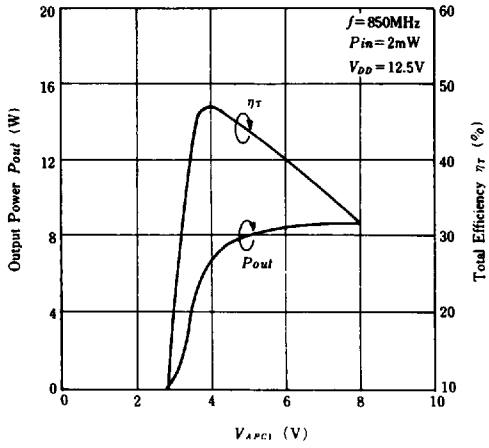
Pout, η_T VS. V_{DD}



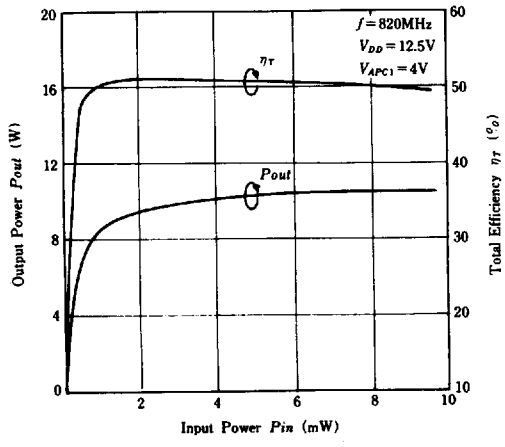
Pout, η_T VS. V_{APC1}



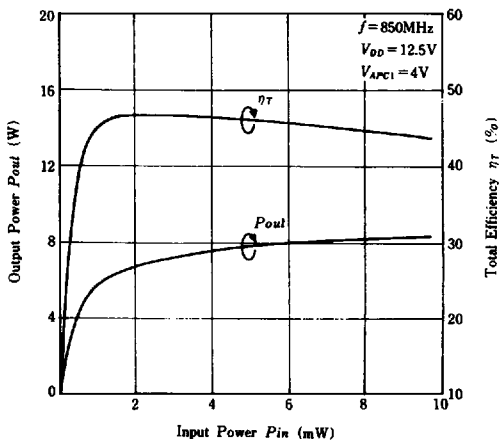
Pout, η_T VS. V_{APC1}



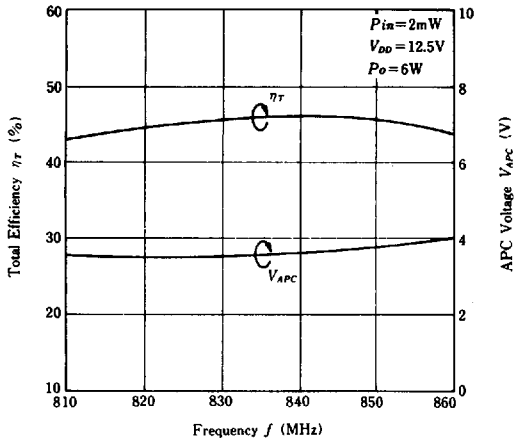
Pout, η_T VS. P_{in}



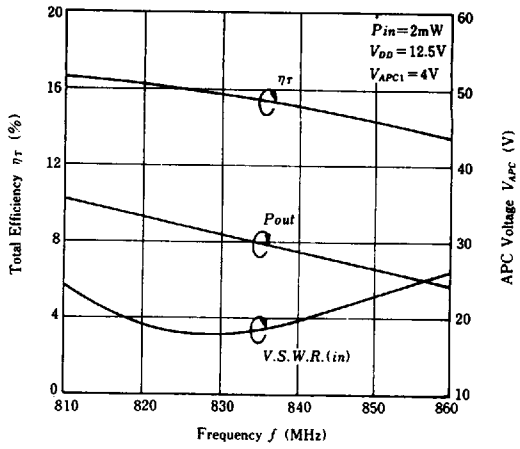
Pout, η_T VS. P_{in}



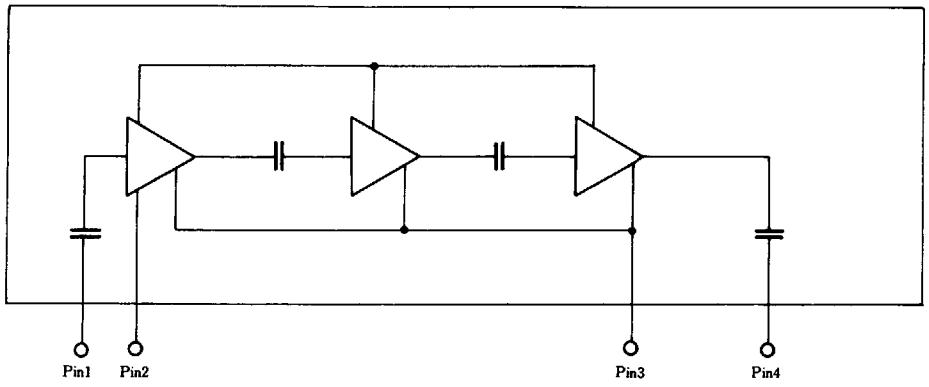
η_T, V_{APC} VS. FREQUENCY



Pout, η_T, VSWR(in) VS. FREQUENCY



■INTERNAL DIAGRAM



■TEST SYSTEM DIAGRAM