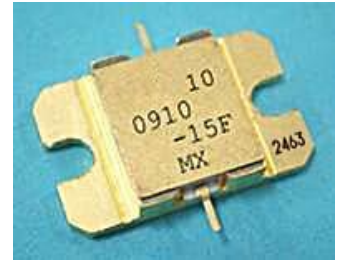


■ Features

- High Output Power: P1dB=42.0dBm(Typ.)
- High Gain: G1dB=7.5dB(Typ.)
- High Power Added Efficiency: PAE=32%(Typ.)
- Broad Band: Frequency=9.5 to10.5GHz
- Internally Matched
- Hermetically Sealed Package

■ Description

The FLM0910-15F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50ohm system.



ABSOLUTE MAXIMUM RATING (Case Temperature $T_c=25$ deg.C)

Item	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	15	V
Gate-Source Voltage	V_{GS}	-5	V
Total Power Dissipation	P_T	57.7	W
Storage Temperature	T_{stg}	-65 to +175	deg.C
Channel Temperature	T_{ch}	175	deg.C

RECOMMENDED OPERATING CONDITION

Item	Symbol	Condition	Limit	Unit
Drain-Source Voltage	V_{DS}		≤ 10	V
Forward Gate Current	I_{GF}	$R_g=50\Omega$	≤ 16.7	mA
Reverse Gate Current	I_{GR}	$R_g=50\Omega$	≥ -3.62	mA

ELECTRICAL CHARACTERISTICS (Case Temperature $T_c=25$ deg.C)

Item	Symbol	Condition	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS}=5V, V_{GS}=0V$	-	7.0	10.5	A
Trans Conductance	g_m	$V_{DS}=5V, I_{DS}=3.5A$	-	4500	-	mS
Pinch-off Voltage	V_P	$V_{DS}=5V, I_{DS}=300mA$	-0.5	-1.5	-3.0	V
Gate-Source Breakdown Voltage	V_{GSO}	$I_{GS}=-300\mu A$	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS}=10V$ $I_{DS}(DC)=3.6A(typ.)$ $f=9.5$ to 10.5 GHz	41.0	42.0	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		6.5	7.5	-	dB
Drain Current	I_{DSR}		-	4.0	5.0	A
Power Added Efficiency	PAE		-	32	-	%
Gain Flatness	ΔG		-	-	1.2	dB
Thermal Resistance	R_{th}	Channel to Case	-	2.3	2.6	deg.C/W
Channel Temperature Rise	ΔT_{ch}	$(V_{DS} \times I_{DSR} - P_{out} + P_{in}) \times R_{th}$	-	-	100	deg.C

G.C.P. : Gain Compression Point, S.C.L. : Single Carrier Level

CASE STYLE	IB
RoHS Compliance	YES
ESD	Class 3A

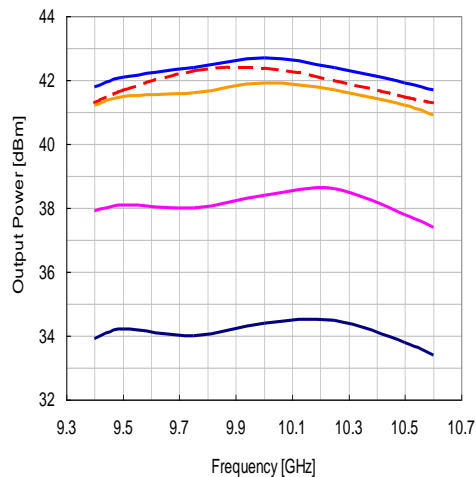
4000V to < 8000V

Note : Based on ANSI/ESDA/JEDEC JS-001-2012(C=100pF, R=1.5kohm)



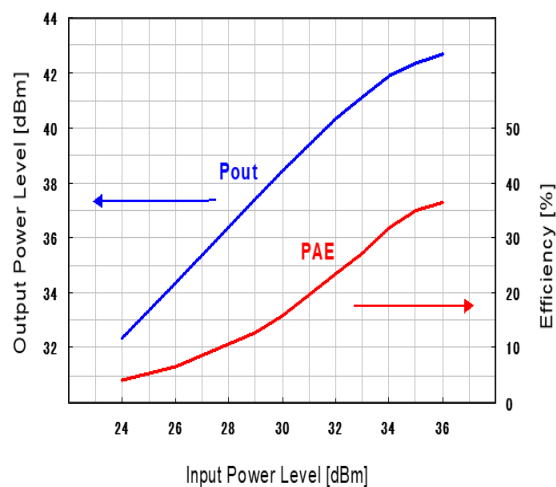
● **RF Characteristics**

OUTPUT POWER v.s. FREQUENCY
 $V_{DS}=10V$, $I_{DS(DC)}=3600mA$

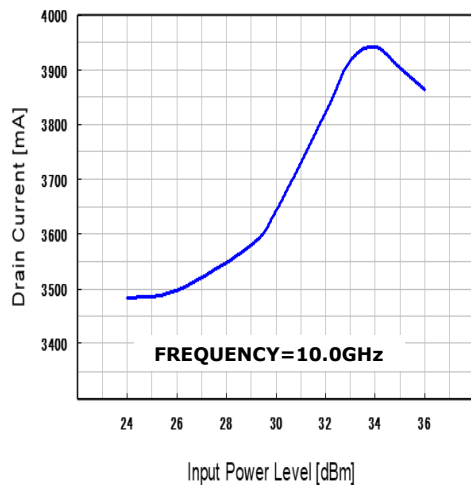


— Pin=26dBm — Pin=30dBm — Pin=34dBm
— Pin=36dBm P1dB

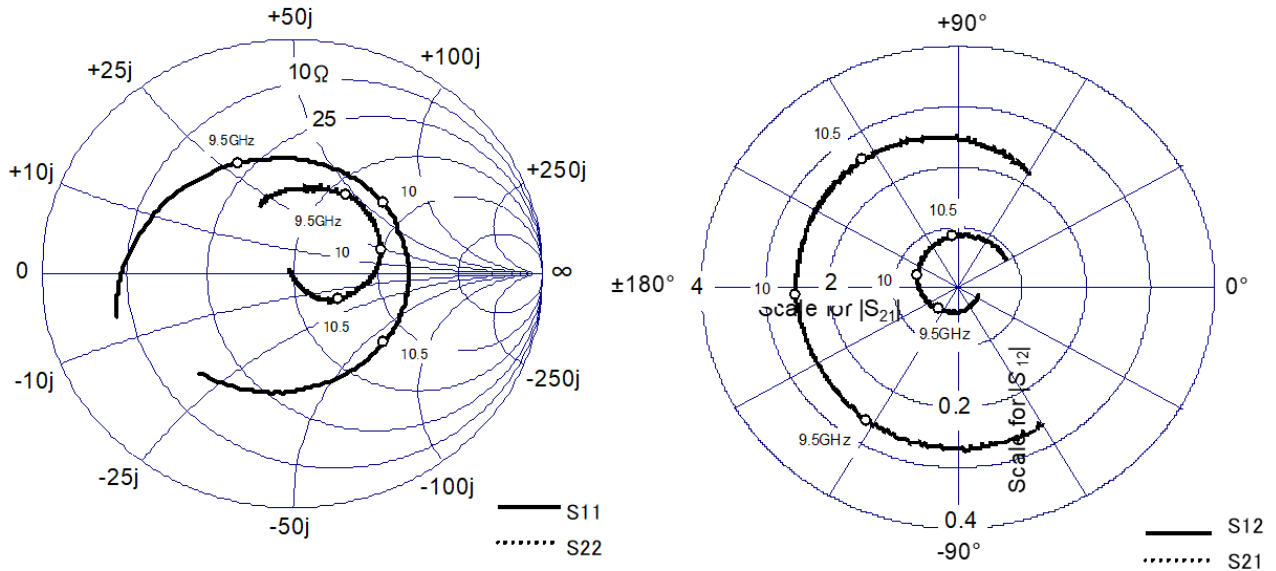
**OUTPUT POWER, POWER ADDED
EFFICIENCY**
v.s. INPUT POWER
 $V_{DS}=10V$, $I_{DS(DC)}=3600mA$



DRAIN CURRENT v.s. INPUT POWER
 $V_{DS}=10V$, $I_{DS(DC)}=3600mA$



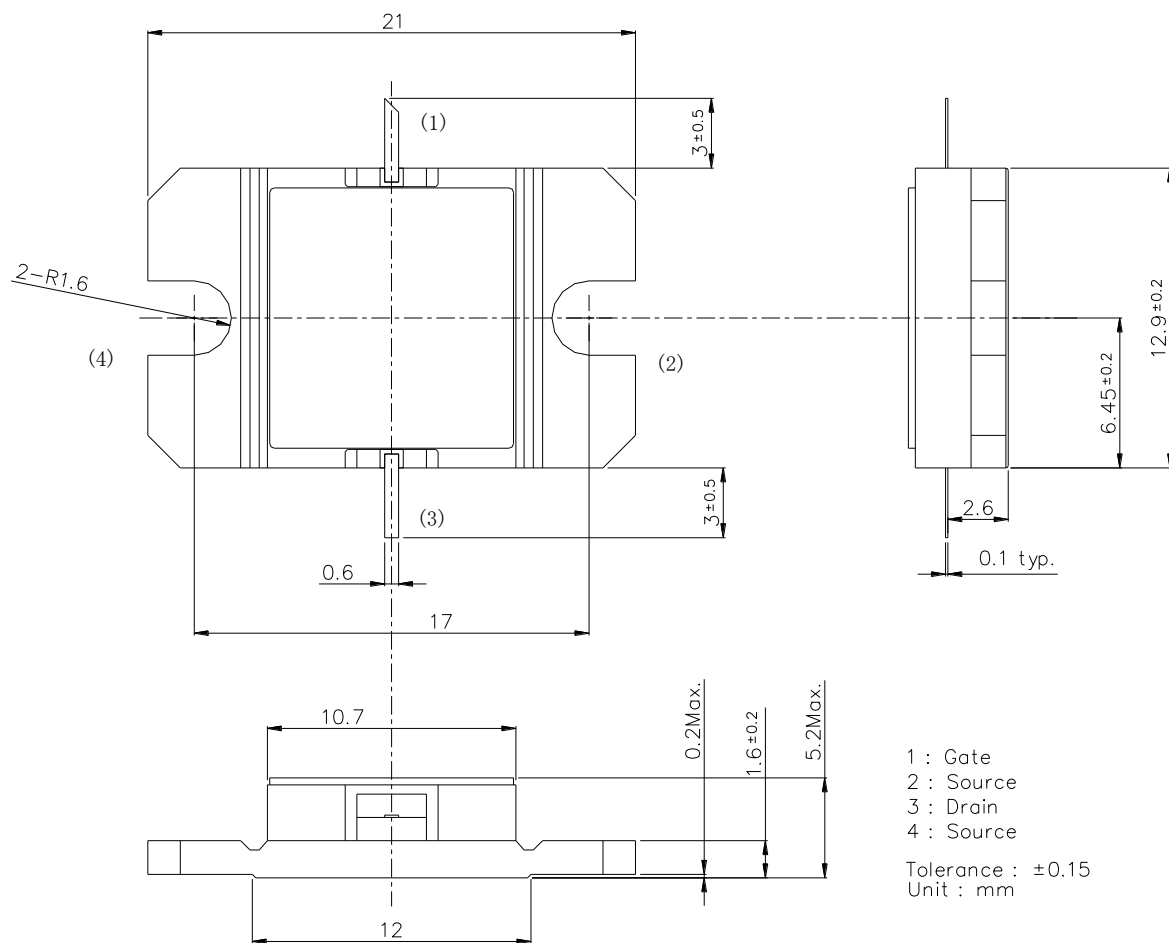
● S-Parameter



$V_{DS}=10.0V$, $I_{DS}=3600mA$

Freq. [GHz]	S11		S21		S12		S22	
	mag	ang	mag	ang	mag	ang	mag	ang
9.3	0.589	147.4	2.678	-98.7	0.041	-88.1	0.374	77.2
9.4	0.544	130.9	2.649	-111.1	0.043	-107.6	0.387	67.0
9.5	0.520	114.6	2.618	-122.5	0.046	-127.3	0.397	57.8
9.6	0.498	98.6	2.569	-134.0	0.049	-141.0	0.401	49.7
9.7	0.488	83.8	2.538	-144.9	0.054	-155.7	0.396	41.6
9.8	0.477	68.8	2.524	-155.2	0.059	-169.5	0.390	33.1
9.9	0.474	54.6	2.509	-165.9	0.061	177.5	0.380	24.6
10.0	0.471	39.4	2.524	-176.9	0.066	163.5	0.368	15.6
10.1	0.467	25.4	2.514	172.4	0.069	149.1	0.349	7.1
10.2	0.462	10.4	2.519	161.2	0.073	136.4	0.321	-1.2
10.3	0.463	-4.6	2.553	150.2	0.077	121.6	0.290	-10.1
10.4	0.468	-21.7	2.563	137.9	0.083	109.8	0.250	-20.5
10.5	0.469	-39.2	2.591	125.3	0.085	95.4	0.215	-30.7
10.6	0.478	-58.6	2.554	112.4	0.088	84.0	0.174	-40.2
10.7	0.488	-77.5	2.514	98.8	0.090	69.4	0.126	-48.5

● Package Out line
Case Style : IB



For Safety, Observe the Following Procedures Environmental Management

- Do not put this product into the mouth.
- Do not alter the form of this product into a gas, powder, or liquid through burning, crushing, or chemical processing as these by-products are dangerous to the human body if inhaled, ingested, or swallowed.
- Respect all applicable laws of the country when discarding this product.
This product must be disposed in accordance with methods specified by applicable hazardous waste procedures.

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