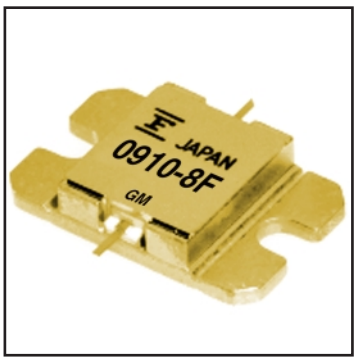
FLM0910-8F

X, Ku-Band Internally Matched FET

FEATURES



- High Output Power: P_{1dB} = 39.0dBm (Typ.)
- High Gain: G_{1dB} = 7.5dB (Typ.)
- High PAE: η_{add} = 29% (Typ.)
- Low IM_3 = -46dBc@Po = 28.5dBm
- Broad Band: 9.5 ~ 10.5GHz
- Impedance Matched Zin/Zout = 50Ω

DESCRIPTION

The FLM0910-8F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system.

Fujitsu's stringent Quality Assurance Program assures the highest reliability and consistent performance.

ABSOLUTE MAXIMUM RATING (Ambient Temperature Ta=25°C)

Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}		15	V
Gate-Source Voltage	V_{GS}		-5	V
Total Power Dissipation	P_T	T_c = 25°C	42.8	W
Storage Temperature	T_{stg}		-65 to +175	°C
Channel Temperature	T_{ch}		175	°C

Fujitsu recommends the following conditions for the reliable operation of GaAs FETs:

1. The drain-source operating voltage (V_{DS}) should not exceed 10 volts.
2. The forward and reverse gate currents should not exceed 32.0 and -4.4 mA respectively with gate resistance of 100Ω.

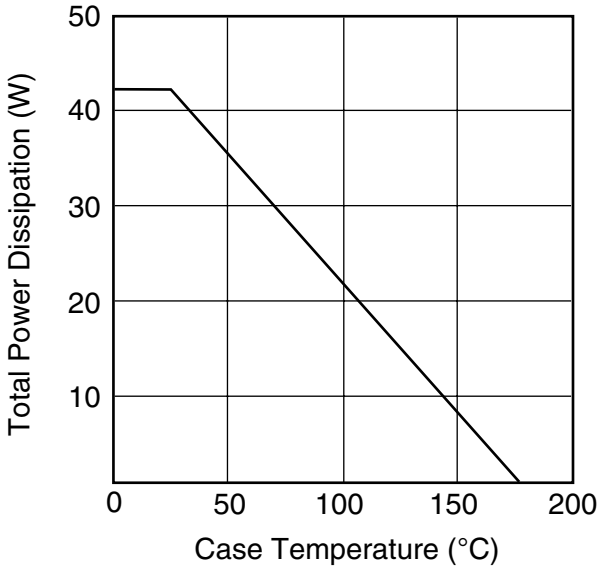
ELECTRICAL CHARACTERISTICS (Ambient Temperature Ta=25°C)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	V_{DS} = 5V, V_{GS} = 0V	-	3400	5200	mA
Transconductance	gm	V_{DS} = 5V, I_{DS} = 2200mA	-	3400	-	mS
Pinch-off Voltage	V_p	V_{DS} = 5V, I_{DS} = 170mA	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	V_{GSO}	I_{GS} = -170μA	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	V_{DS} =10V, I_{DS} = 0.65 I_{DSS} (Typ.), f =9.5 ~10.5 GHz, Z_S=Z_L= 50 ohm	38.5	39.0	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		6.5	7.5	-	dB
Drain Current	I_{dsr}		-	2200	2600	mA
Power-added Efficiency	ηadd		-	29	-	%
Gain Flatness	ΔG		-	-	±0.6	dB
3rd Order Intermodulation Distortion	IM_3	f = 10.5 GHz, Δf = 10 MHz 2-Tone Test P_{out} = 28.5dBm S.C.L.	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	3.0	3.5	°C/W
Channel Temperature Rise	ΔT_{ch}	10V x I_{dsr} x R_{th}	-	-	80	°C

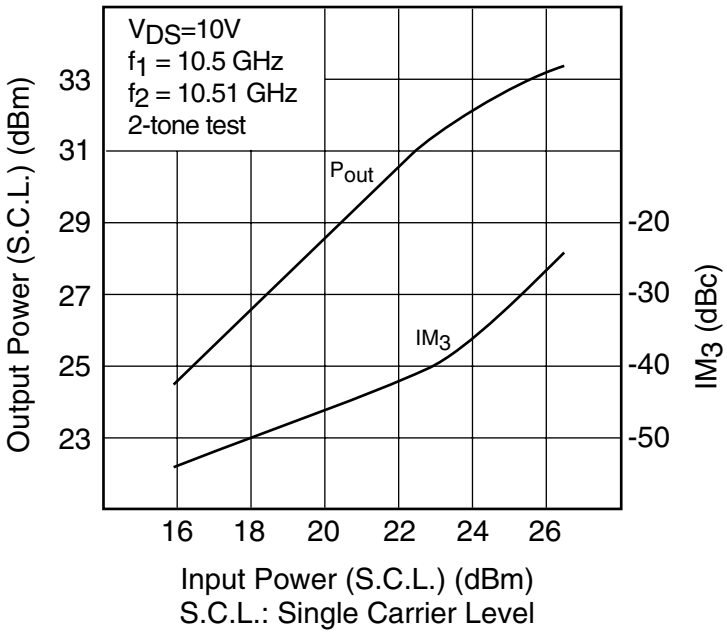
CASE STYLE: IB

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

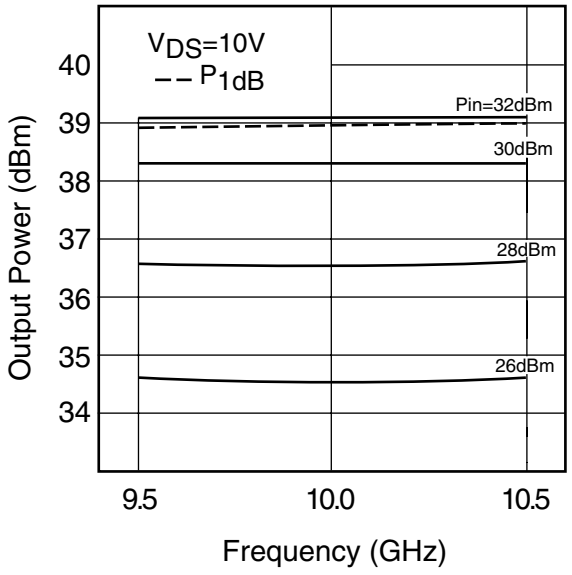
POWER DERATING CURVE



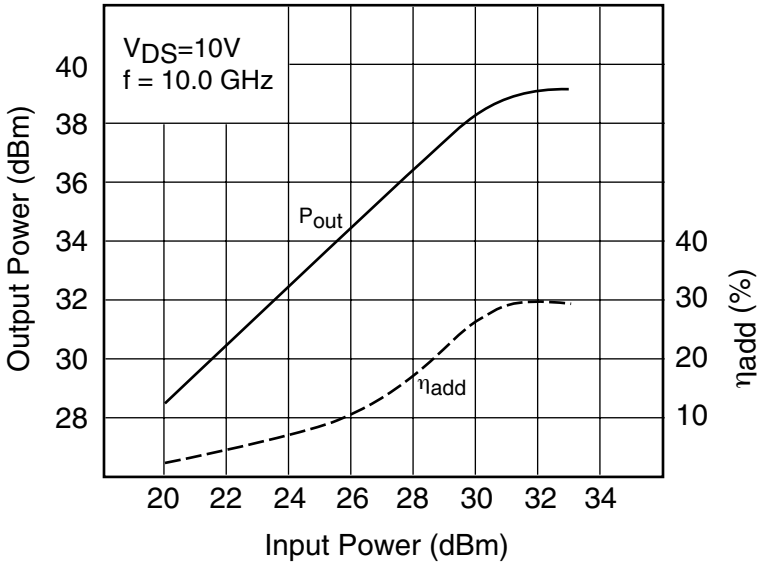
OUTPUT POWER & IM_3 vs. INPUT POWER

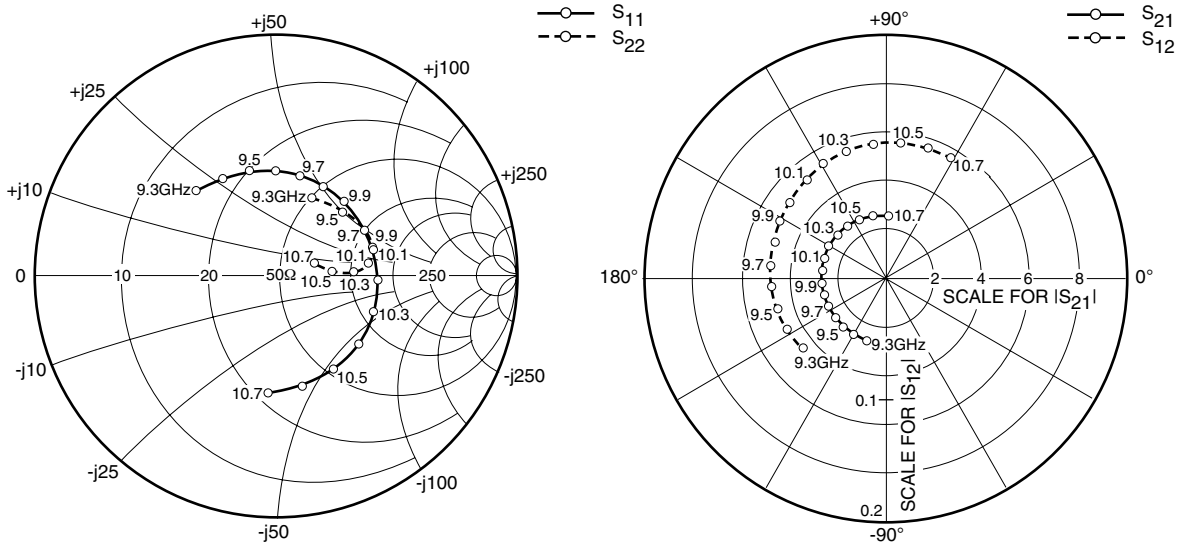


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER





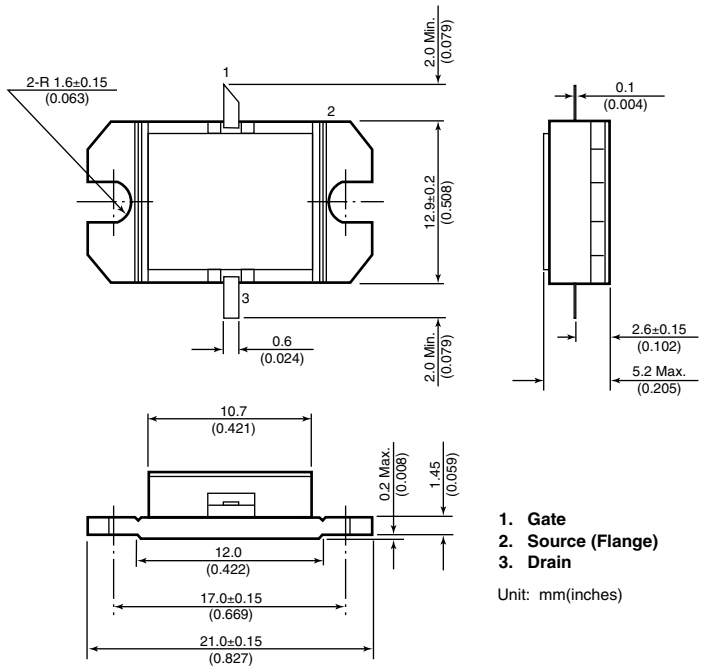
S-PARAMETERS

V_{DS} = 10V, I_{DS} = 2200mA

FREQUENCY	S11		S21		S12		S22	
(MHZ)	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
9300	.489	132.9	2.699	-108.2	.090	-140.2	.352	66.0
9400	.464	118.8	2.686	-120.0	.092	-152.4	.364	54.7
9500	.451	104.4	2.692	-131.6	.093	-164.8	.377	44.2
9600	.438	90.5	2.657	-142.5	.095	-175.1	.397	35.3
9700	.428	76.7	2.642	-153.9	.096	174.3	.412	28.2
9800	.421	62.4	2.640	-164.8	.095	162.4	.421	21.9
9900	.420	48.0	2.637	-175.5	.100	151.7	.417	17.2
10000	.418	32.1	2.651	173.5	.101	142.3	.406	12.1
10100	.420	15.7	2.668	162.3	.104	130.3	.385	7.9
10200	.424	-2.0	2.689	150.9	.107	119.4	.358	5.2
10300	.428	-20.4	2.703	138.8	.109	108.0	.320	2.6
10400	.440	-39.3	2.703	126.7	.108	96.1	.276	2.6
10500	.452	-58.2	2.691	114.2	.112	84.3	.231	3.3
10600	.469	-76.6	2.656	101.7	.112	72.3	.194	8.4
10700	.484	-94.2	2.600	89.0	.111	61.1	.166	17.4

Case Style "IB"

Metal-Ceramic Hermetic Package



1. **Gate**
2. **Source (Flange)**
3. **Drain**

Unit: mm(inches)

For further information please contact:

FUJITSU COMPOUND SEMICONDUCTOR, INC.
2355 Zanker Rd.
San Jose, CA 95131-1138, U.S.A.
Phone: (408) 232-9500
FAX: (408) 428-9111
www.fcsi.fujitsu.com

FUJITSU MICROELECTRONICS, LTD.
Compound Semiconductor Division
Network House
Norreys Drive
Maidenhead, Berkshire SL6 4FJ
Phone:+44 (0)1628 504800
FAX:+44 (0)1628 504888

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- **Do not put these products 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.**
- **Observe government laws and company regulations when discarding this product. This product must be discarded in accordance with methods specified by applicable hazardous waste procedures.**

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