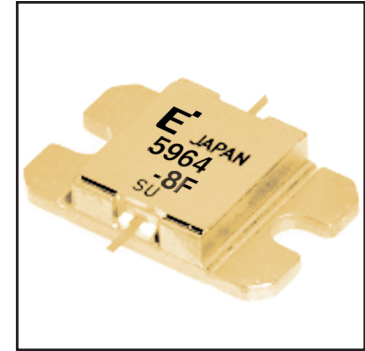


FEATURES

- High Output Power: $P_{1dB} = 39.5dBm$ (Typ.)
- High Gain: $G_{1dB} = 10.0dB$ (Typ.)
- High PAE: $\eta_{add} = 37%$ (Typ.)
- Low $IM_3 = -46dBc @ P_o = 28.5dBm$
- Broad Band: 5.9 ~ 6.4GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package



DESCRIPTION

The FLM5964-8F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system.

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

ABSOLUTE MAXIMUM RATING (Ambient Temperature $T_a=25^\circ C$)

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

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 100 Ω .

ELECTRICAL CHARACTERISTICS (Ambient Temperature $T_a=25^\circ C$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS} = 5V, V_{GS} = 0V$	-	3400	5200	mA
Transconductance	g_m	$V_{DS} = 5V, I_{DS} = 2200mA$	-	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}	$I_{GS} = -170\mu A$	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS} = 10V,$ $I_{DS} = 0.65I_{DSS}$ (Typ.), $f = 5.9 \sim 6.4$ GHz, $Z_S = Z_L = 50$ ohm	38.5	39.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		9.0	10.0	-	dB
Drain Current	I_{dsr}		-	2200	2600	mA
Power-added Efficiency	η_{add}		-	37	-	%
Gain Flatness	ΔG		-	-	± 0.6	dB
3rd Order Intermodulation Distortion	IM_3	$f = 6.4$ GHz, $\Delta f = 10$ 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	$^\circ C/W$
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{dsr} \times R_{th}$	-	-	80	$^\circ C$

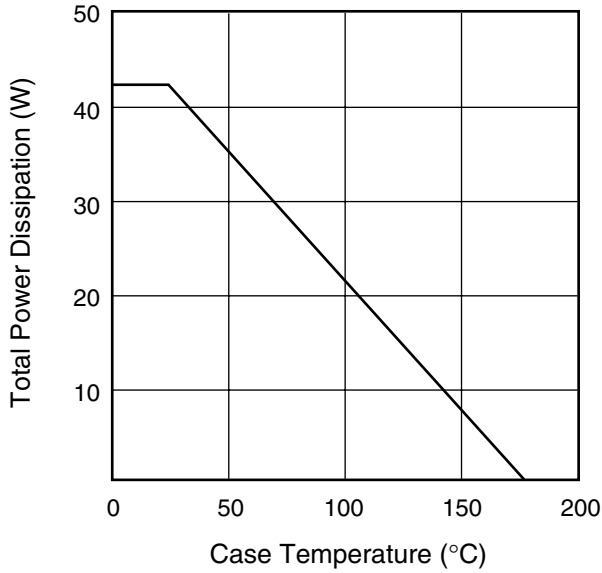
CASE STYLE: IB

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

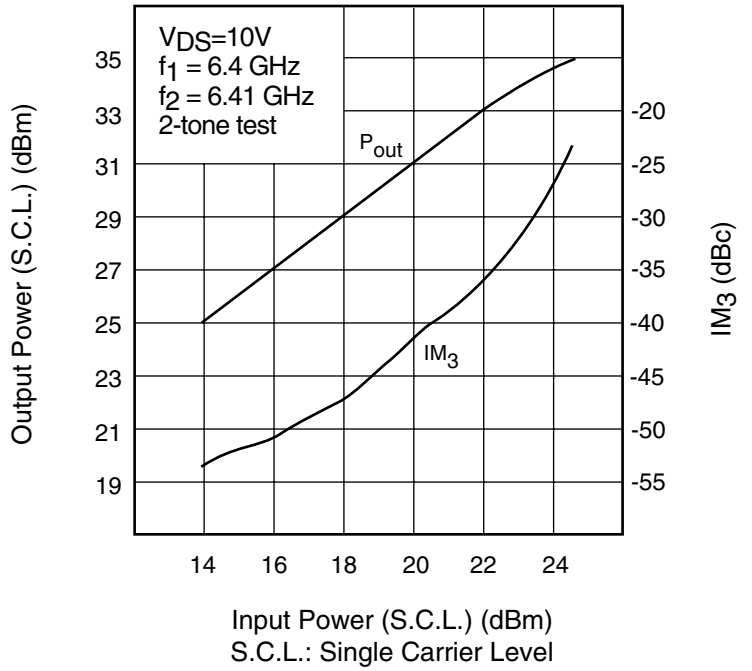
FLM5964-8F

C-Band Internally Matched FET

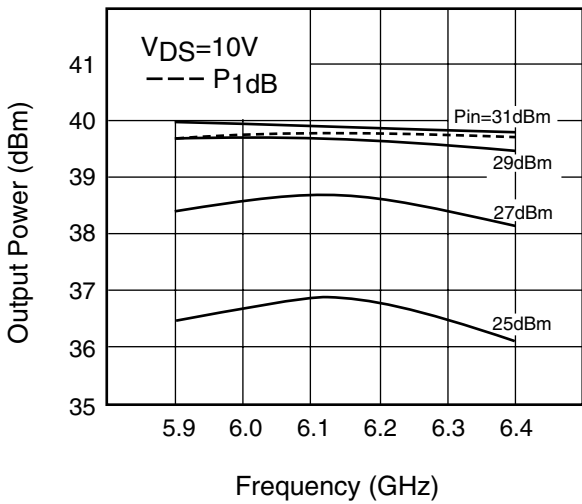
POWER DERATING CURVE



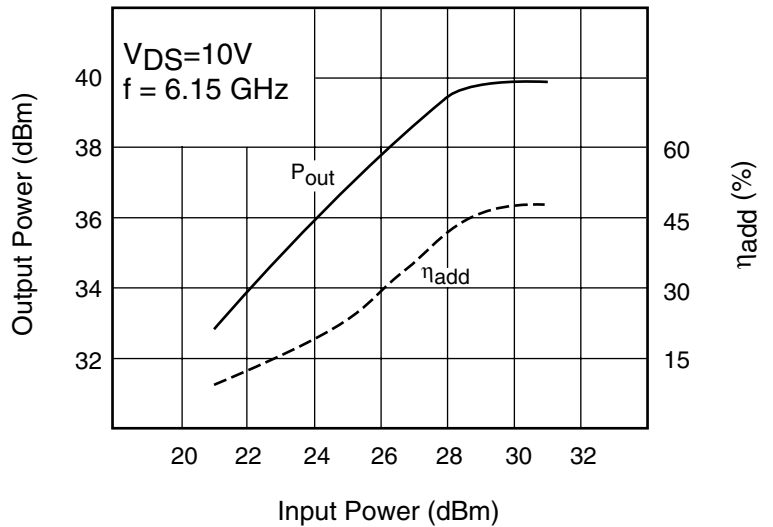
OUTPUT POWER & IM₃ vs. INPUT POWER

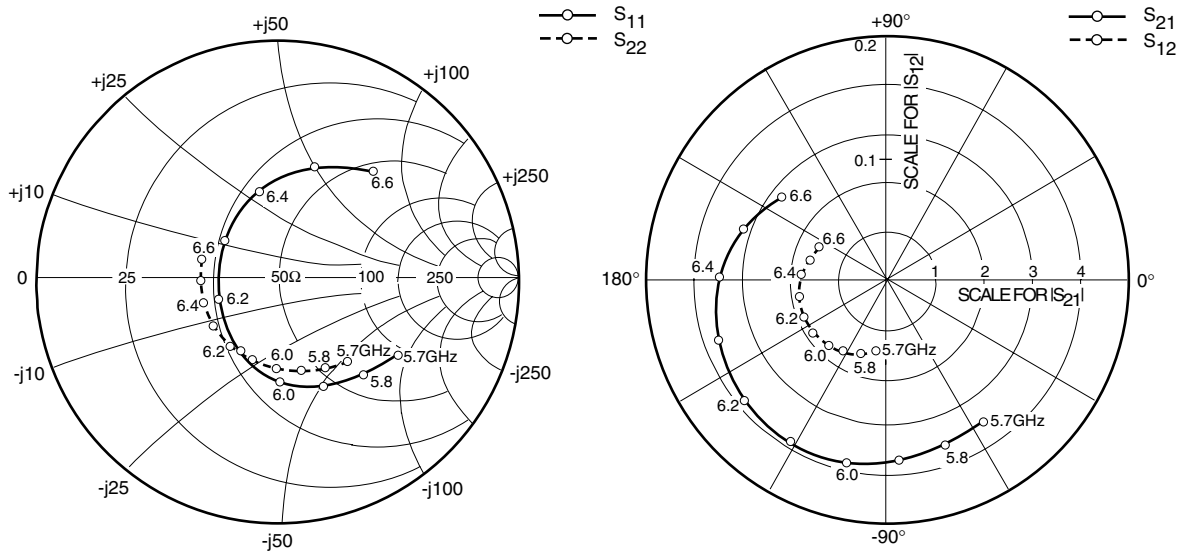


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER





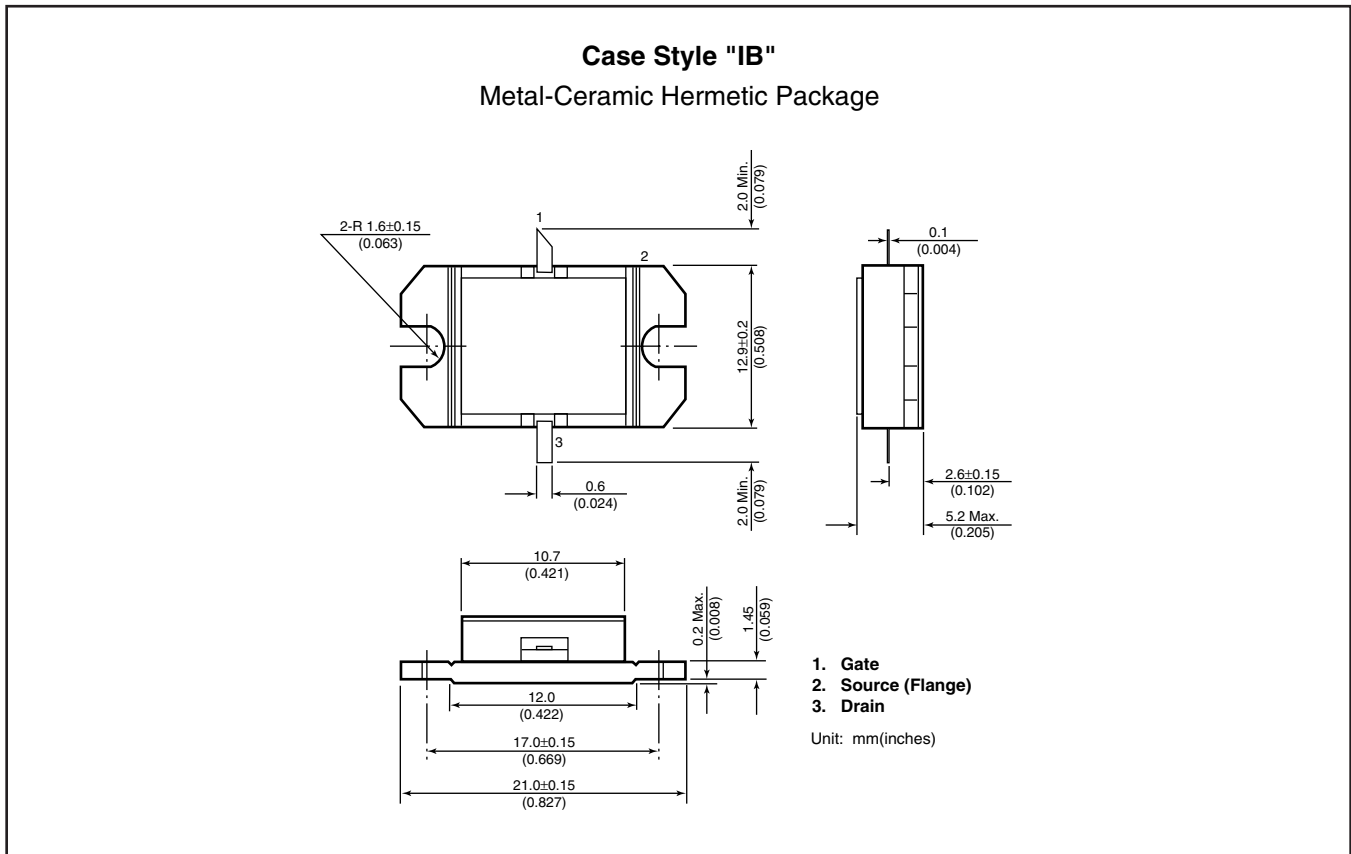
S-PARAMETERS

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

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5700	.584	-33.2	3.514	-56.2	.060	-99.3	.442	-50.4
5800	.549	-49.0	3.607	-70.8	.064	-108.7	.415	-62.2
5900	.495	-67.2	3.708	-86.5	.069	-120.7	.392	-75.7
6000	.426	-89.1	3.811	-103.3	.071	-131.5	.370	-90.7
6100	.342	-118.5	3.866	-121.3	.075	-144.9	.350	-107.2
6200	.276	-160.1	3.849	-140.4	.074	-156.2	.337	-125.4
6300	.281	146.6	3.723	-160.4	.074	-168.8	.329	-144.2
6400	.369	102.5	3.473	179.6	.071	176.9	.325	-162.2
6500	.486	71.8	3.145	160.3	.066	165.9	.322	-179.1
6600	.589	48.2	2.763	142.2	.061	154.0	.327	165.6

FLM5964-8F

C-Band Internally Matched FET



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CAUTION

Eudyna Devices Inc. products contain **gallium arsenide (GaAs)** which can be hazardous to the human body and the environment. For safety, observe the following procedures:

- 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.
- 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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