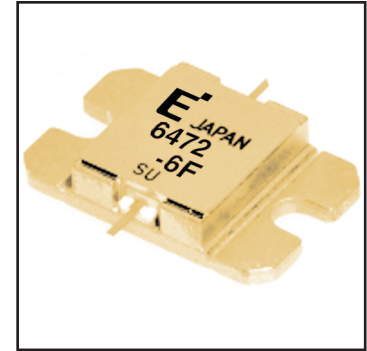


FEATURES

- High Output Power: $P_{1dB} = 38.5dBm$ (Typ.)
- High Gain: $G_{1dB} = 9.5dB$ (Typ.)
- High PAE: $\eta_{add} = 37%$ (Typ.)
- Low $IM_3 = -46dBc @ P_o = 27.5dBm$
- Broad Band: 6.4 ~ 7.2GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package

DESCRIPTION

The FLM6472-6F 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	$T_C = 25^\circ C$	31.2	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 16.0 and -2.8 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}	$V_{DS} = 5V, V_{GS} = 0V$	-	2500	3750	mA
Transconductance	g_m	$V_{DS} = 5V, I_{DS} = 1625mA$	-	2500	-	mS
Pinch-off Voltage	V_p	$V_{DS} = 5V, I_{DS} = 125mA$	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	V_{GSO}	$I_{GS} = -125\mu A$	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS} = 10V,$ $I_{DS} = 0.65 I_{DSS}$ (Typ.), $f = 6.4 \sim 7.2$ GHz, $Z_S = Z_L = 50$ ohm	37.5	38.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		8.5	9.5	-	dB
Drain Current	I_{dsr}		-	1625	1900	mA
Power-added Efficiency	η_{add}		-	37	-	%
Gain Flatness	ΔG		-	-	± 0.6	dB
3rd Order Intermodulation Distortion	IM_3	$f = 7.2$ GHz, $\Delta f = 10$ MHz 2-Tone Test $P_{out} = 27.5dBm$ S.C.L.	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	4.0	4.8	$^\circ C/W$
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{dsr} \times R_{th}$	-	-	80	$^\circ C$

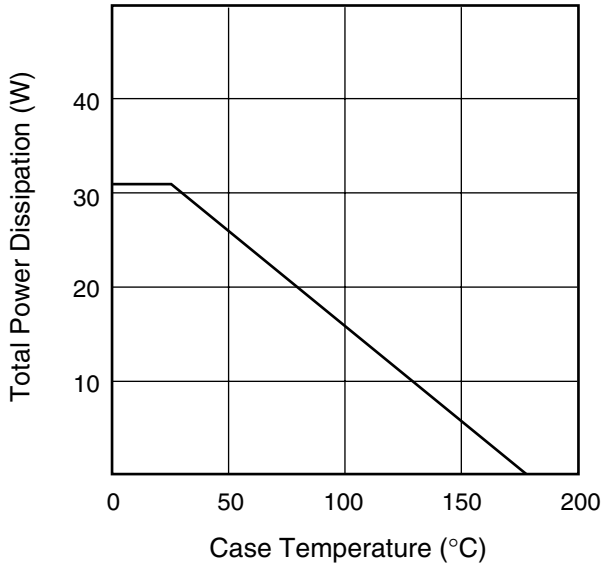
CASE STYLE: IB

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

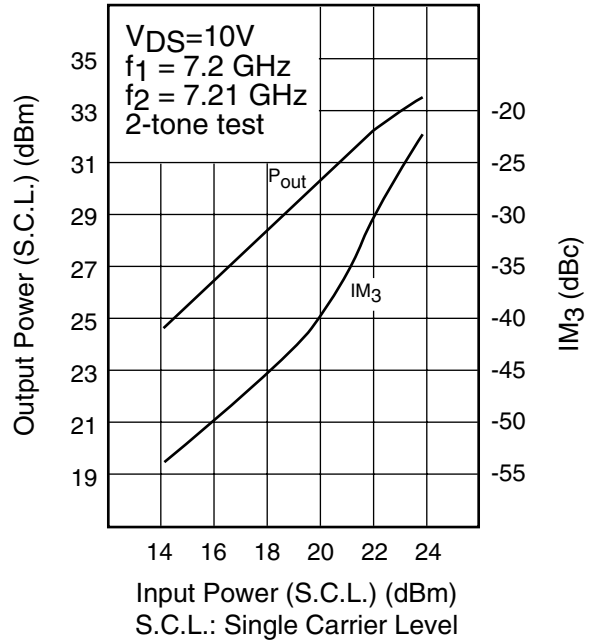
FLM6472-6F

C-Band Internally Matched FET

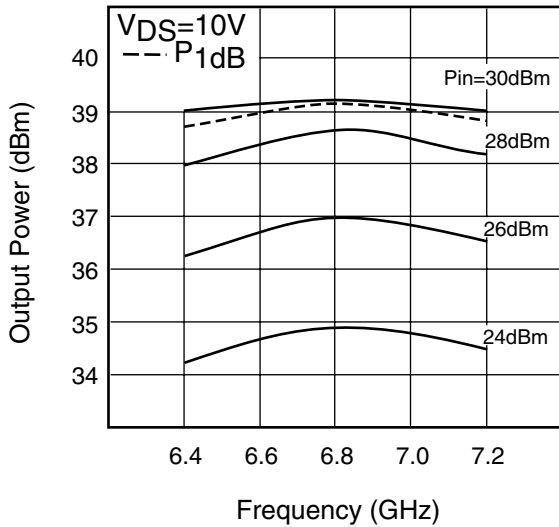
POWER DERATING CURVE



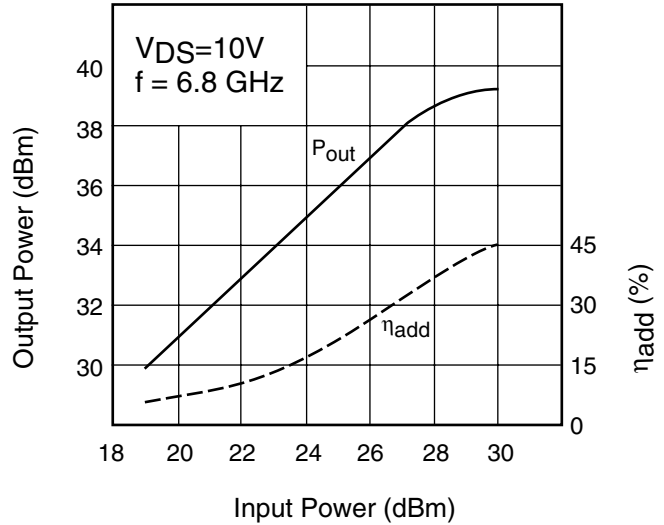
OUTPUT POWER & IM₃ vs. INPUT POWER

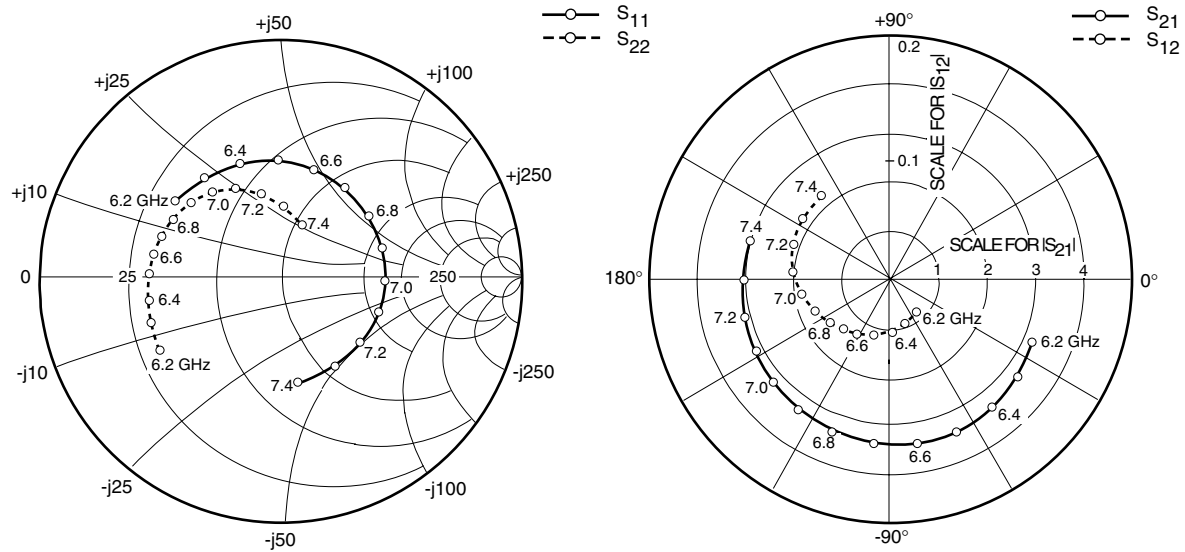


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER





S-PARAMETERS

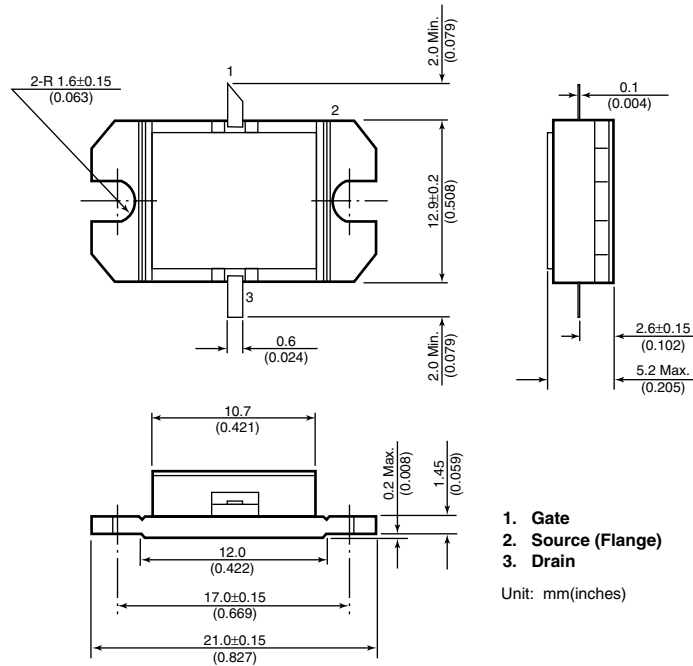
$V_{DS} = 10V, I_{DS} = 1625mA$

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6200	.539	144.1	3.216	-24.3	.034	-53.7	.588	-149.8
6300	.521	127.1	3.305	-37.9	.039	-73.7	.574	-161.0
6400	.507	109.4	3.354	-52.0	.044	-91.6	.560	-171.3
6500	.490	91.3	3.413	-66.7	.049	-107.9	.547	179.3
6600	.474	72.5	3.438	-81.0	.054	-122.4	.538	170.2
6700	.462	53.7	3.410	-96.0	.058	-134.3	.529	161.2
6800	.451	34.7	3.374	-110.8	.063	-145.4	.514	151.5
6900	.442	16.2	3.309	-125.4	.069	-158.2	.493	140.8
7000	.435	-1.9	3.232	-139.2	.076	-171.4	.461	129.3
7100	.431	-19.1	3.159	-152.1	.083	175.6	.421	117.2
7200	.429	-38.0	3.124	-166.0	.086	160.9	.367	103.9
7300	.432	-57.9	3.079	179.9	.088	146.8	.301	88.4
7400	.441	-78.9	3.035	164.7	.090	130.5	.234	70.5

FLM6472-6F

C-Band Internally Matched FET

Case Style "IB" Metal-Ceramic Hermetic Package



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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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