

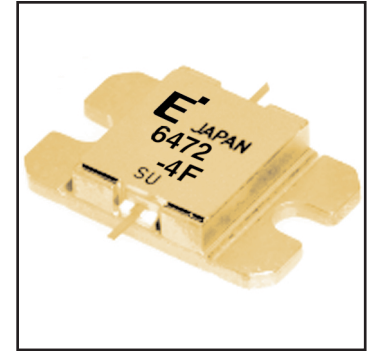
### FEATURES

- High Output Power:  $P_{1dB} = 36.5\text{dBm}$  (Typ.)
- High Gain:  $G_{1dB} = 9.5\text{dB}$  (Typ.)
- High PAE:  $\eta_{add} = 36\%$  (Typ.)
- Low  $IM_3 = -46\text{dBc}$  @  $P_o = 25.5\text{dBm}$
- Broad Band: 6.4 ~ 7.2GHz
- Impedance Matched  $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package

### DESCRIPTION

The FLM6472-4F 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 $T_a=25^\circ\text{C}$ )

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

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 -2.2 mA respectively with gate resistance of 100 $\Omega$ .

### ELECTRICAL CHARACTERISTICS (Ambient Temperature $T_a=25^\circ\text{C}$ )

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	$I_{DSS}$	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}$	-	1700	2600	mA
Transconductance	$g_m$	$V_{DS} = 5\text{V}, I_{DS} = 1100\text{mA}$	-	1700	-	mS
Pinch-off Voltage	$V_p$	$V_{DS} = 5\text{V}, I_{DS} = 85\text{mA}$	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	$V_{GSO}$	$I_{GS} = -85\mu\text{A}$	-5.0	-	-	V
Output Power at 1dB G.C.P.	$P_{1dB}$	$V_{DS} = 10\text{V},$ $I_{DS} = 0.65 I_{DSS}$ (Typ.), $f = 6.4 \sim 7.2\text{GHz},$ $Z_S = Z_L = 50\text{ohm}$	35.5	36.5	-	dBm
Power Gain at 1dB G.C.P.	$G_{1dB}$		8.5	9.5	-	dB
Drain Current	$I_{dsr}$		-	1100	1300	mA
Power-added Efficiency	$\eta_{add}$		-	36	-	%
Gain Flatness	$\Delta G$		-	-	$\pm 0.6$	dB
3rd Order Intermodulation Distortion	$IM_3$	$f = 7.2\text{GHz}, \Delta f = 10\text{MHz}$ 2-Tone Test $P_{out} = 25.5\text{dBm S.C.L.}$	-44	-46	-	dBc
Thermal Resistance	$R_{th}$	Channel to Case	-	5.0	6.0	$^\circ\text{C/W}$
Channel Temperature Rise	$\Delta T_{ch}$	$10\text{V} \times I_{dsr} \times R_{th}$	-	-	80	$^\circ\text{C}$

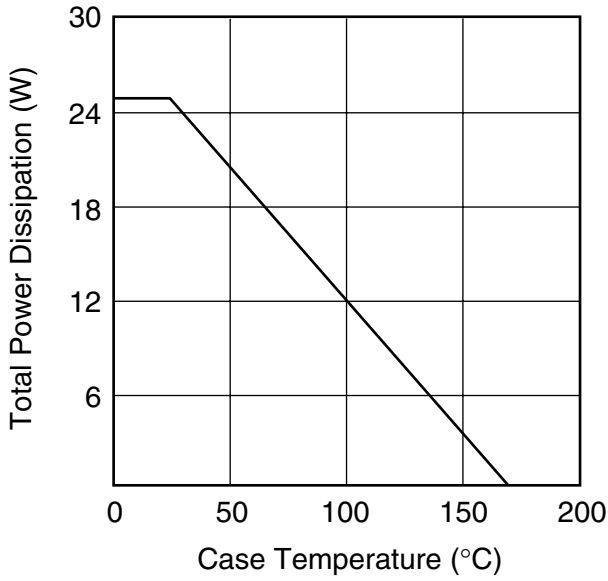
CASE STYLE: IB

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

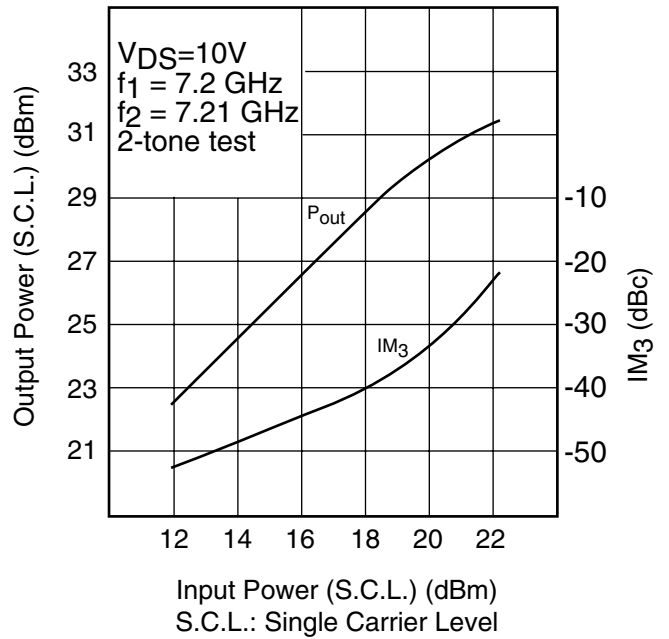
# FLM6472-4F

## C-Band Internally Matched FET

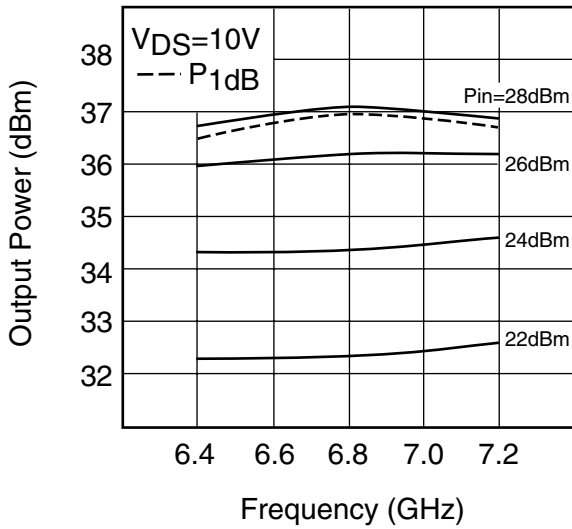
**POWER DERATING CURVE**



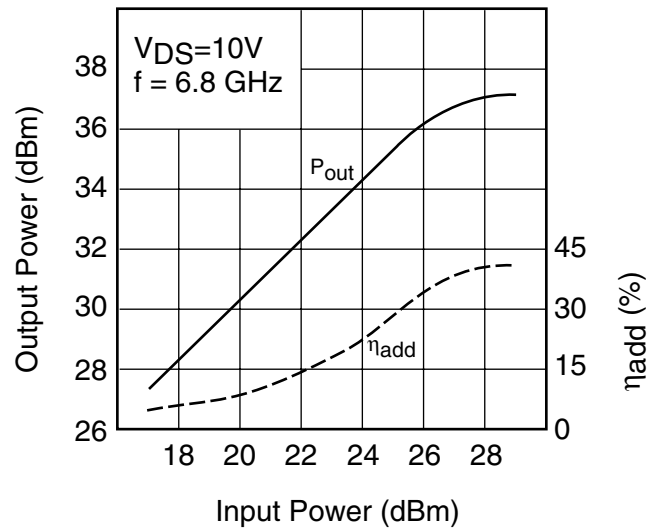
**OUTPUT POWER & IM<sub>3</sub> vs. INPUT POWER**

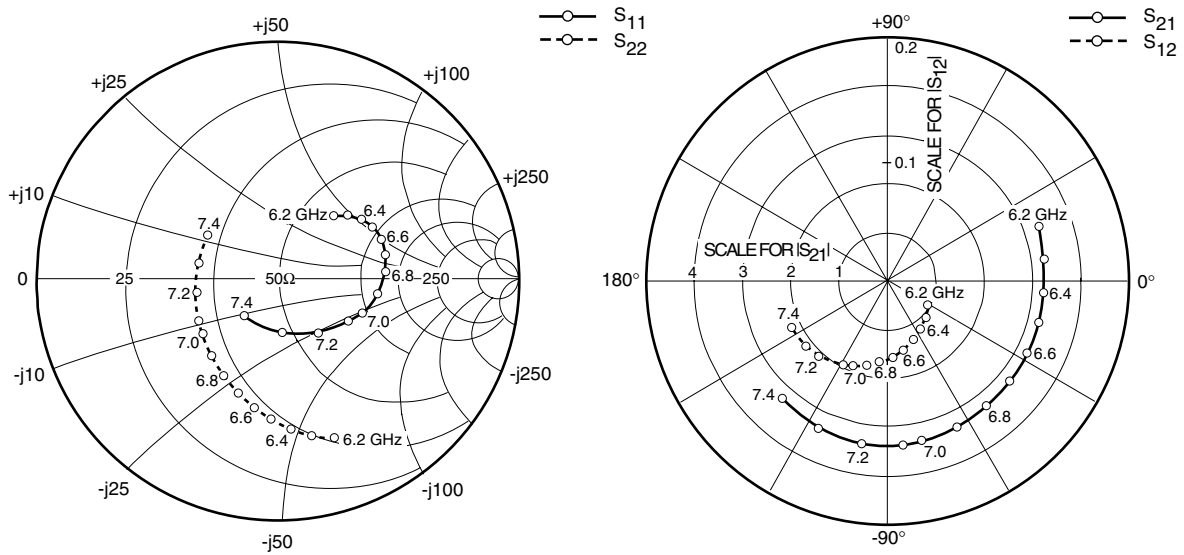


**OUTPUT POWER vs. FREQUENCY**



**OUTPUT POWER vs. INPUT POWER**





### S-PARAMETERS

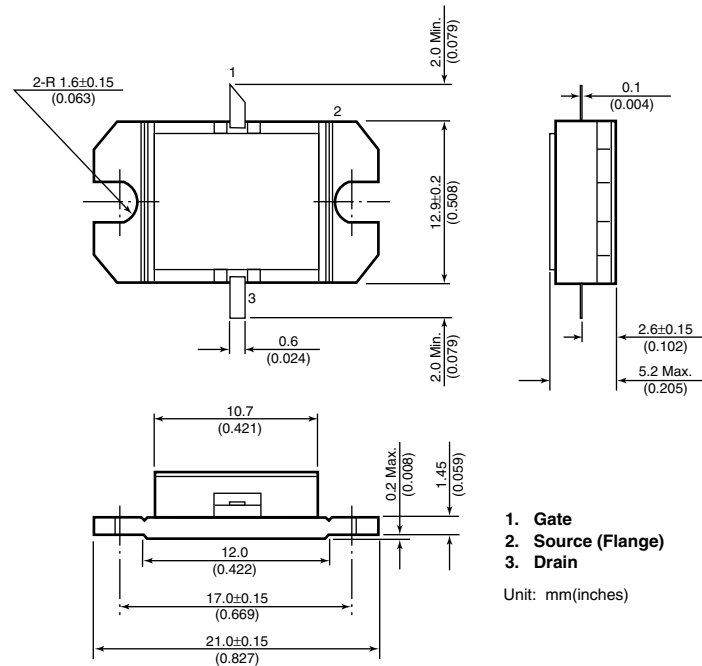
$V_{DS} = 10V, I_{DS} = 1100mA$

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6200	.355	48.9	3.308	19.2	.040	-30.6	.704	-70.9
6300	.396	43.1	3.273	7.5	.044	-43.2	.665	-78.3
6400	.428	36.4	3.256	-4.3	.048	-55.5	.627	-85.6
6500	.449	29.2	3.239	-15.8	.053	-65.7	.586	-93.3
6600	.460	21.2	3.246	-27.5	.058	-75.9	.548	-101.1
6700	.458	12.5	3.260	-39.4	.062	-85.7	.506	-109.8
6800	.445	2.9	3.290	-51.6	.066	-95.6	.465	-119.5
6900	.420	-8.4	3.329	-64.4	.071	-105.0	.429	-130.8
7000	.377	-21.9	3.368	-77.8	.077	-115.1	.391	-144.3
7100	.342	-30.9	3.397	-84.4	.079	-119.2	.371	-152.3
7200	.278	-52.6	3.407	-99.3	.083	-130.0	.347	-170.4
7300	.220	-85.7	3.368	-115.1	.086	-141.4	.338	169.0
7400	.207	-133.5	3.263	-131.9	.087	-153.0	.348	147.4

# FLM6472-4F

## 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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