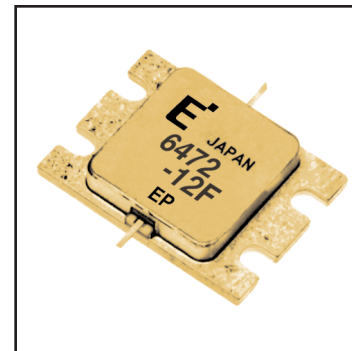


### FEATURES

- High Output Power:  $P_{1dB} = 41.5\text{dBm}$  (Typ.)
- High Gain:  $G_{1dB} = 9.5\text{dB}$  (Typ.)
- High PAE:  $\eta_{add} = 37\%$  (Typ.)
- Low  $IM_3 = -46\text{dBc}$  @  $P_o = 30.5\text{dBm}$
- Broad Band: 6.4 ~ 7.2GHz
- Impedance Matched  $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package

### DESCRIPTION

The FLM6472-12F 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	$P_T$	$T_c = 25^\circ\text{C}$	57.6	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 32.0 and -5.6 mA respectively with gate resistance of 50 $\Omega$ .

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

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	$I_{DSS}$	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}$	-	5000	7500	mA
Transconductance	$g_m$	$V_{DS} = 5\text{V}, I_{DS} = 3250\text{mA}$	-	5000	-	mS
Pinch-off Voltage	$V_p$	$V_{DS} = 5\text{V}, I_{DS} = 250\text{mA}$	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	$V_{GSO}$	$I_{GS} = -250\mu\text{A}$	-5.0	-	-	V
Output Power at 1dB G.C.P.	$P_{1dB}$	$V_{DS} = 10\text{V},$ $I_{DS} = 0.65 I_{DSS}$ (Typ.), $f = 6.4 \sim 7.2 \text{GHz},$ $Z_S = Z_L = 50 \text{ohm}$	40.5	41.5	-	dBm
Power Gain at 1dB G.C.P.	$G_{1dB}$		8.5	9.5	-	dB
Drain Current	$I_{dsr}$		-	3250	3800	mA
Power-added Efficiency	$\eta_{add}$		-	37	-	%
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 $P_{out} = 30.5\text{dBm S.C.L.}$	-44	-46	-	dBc
Thermal Resistance	$R_{th}$	Channel to Case	-	2.3	2.6	$^\circ\text{C/W}$
Channel Temperature Rise	$\Delta T_{ch}$	$10\text{V} \times I_{dsr} \times R_{th}$	-	-	80	$^\circ\text{C}$

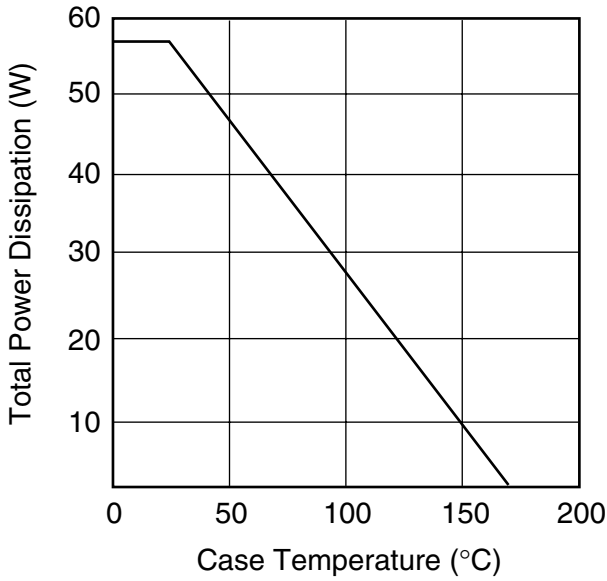
CASE STYLE: IK

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

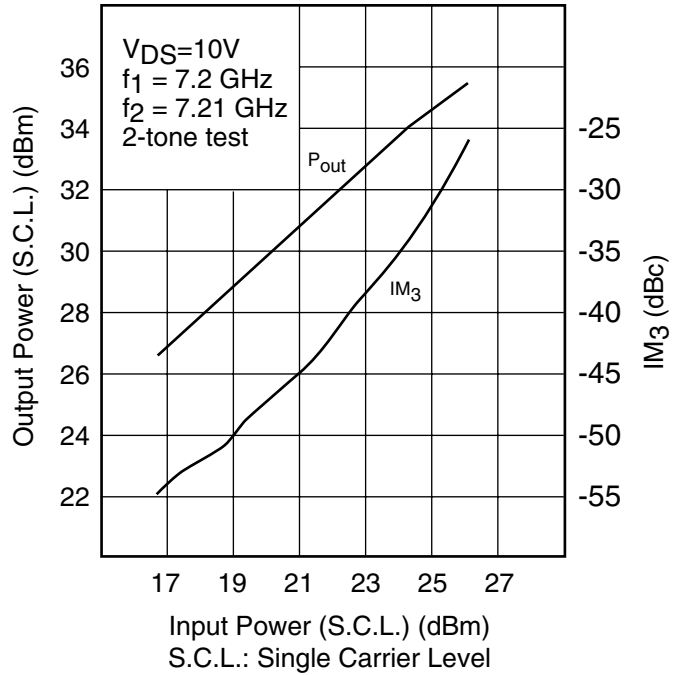
# FLM6472-12F

## C-Band Internally Matched FET

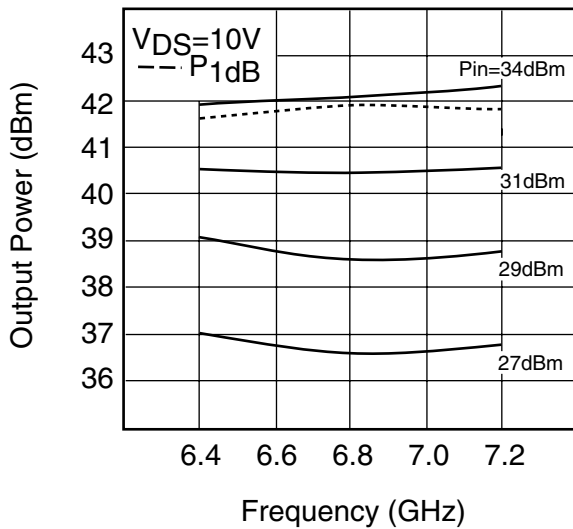
**POWER DERATING CURVE**



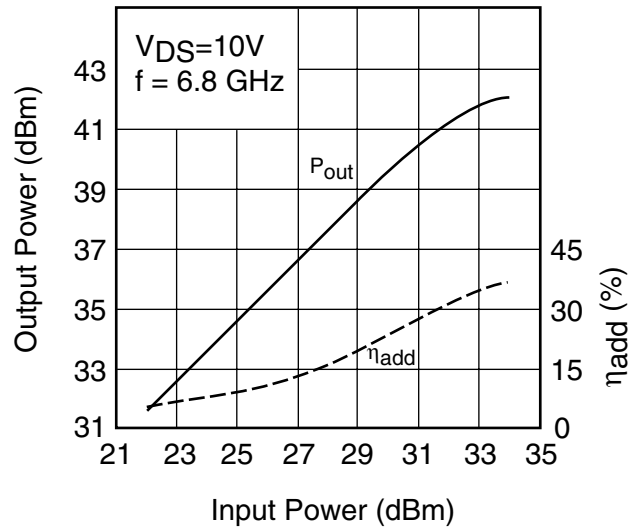
**OUTPUT POWER & IM<sub>3</sub> vs. INPUT POWER**

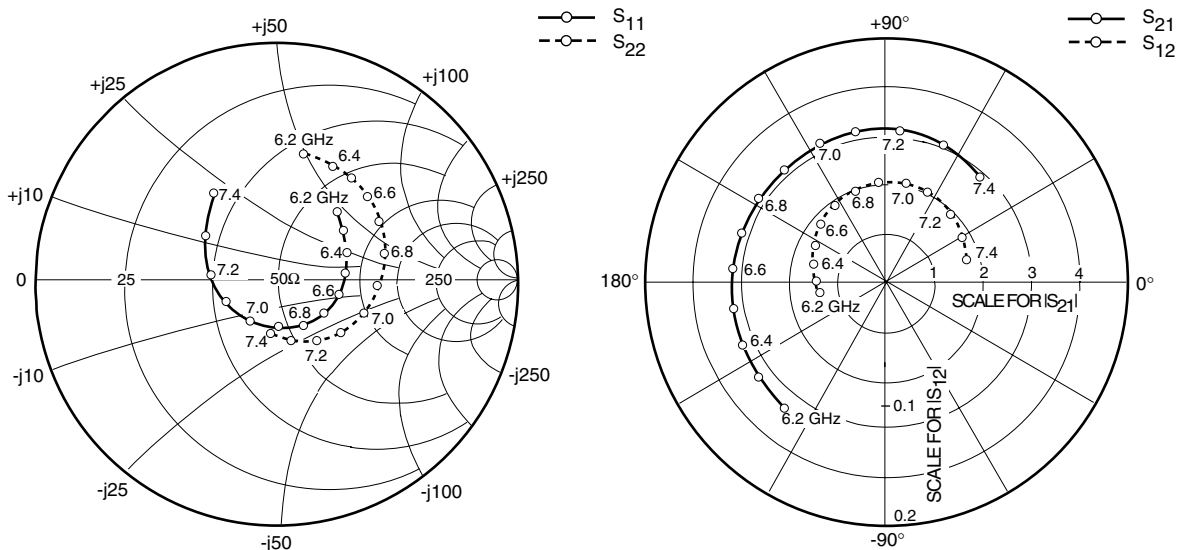


**OUTPUT POWER vs. FREQUENCY**



**OUTPUT POWER vs. INPUT POWER**





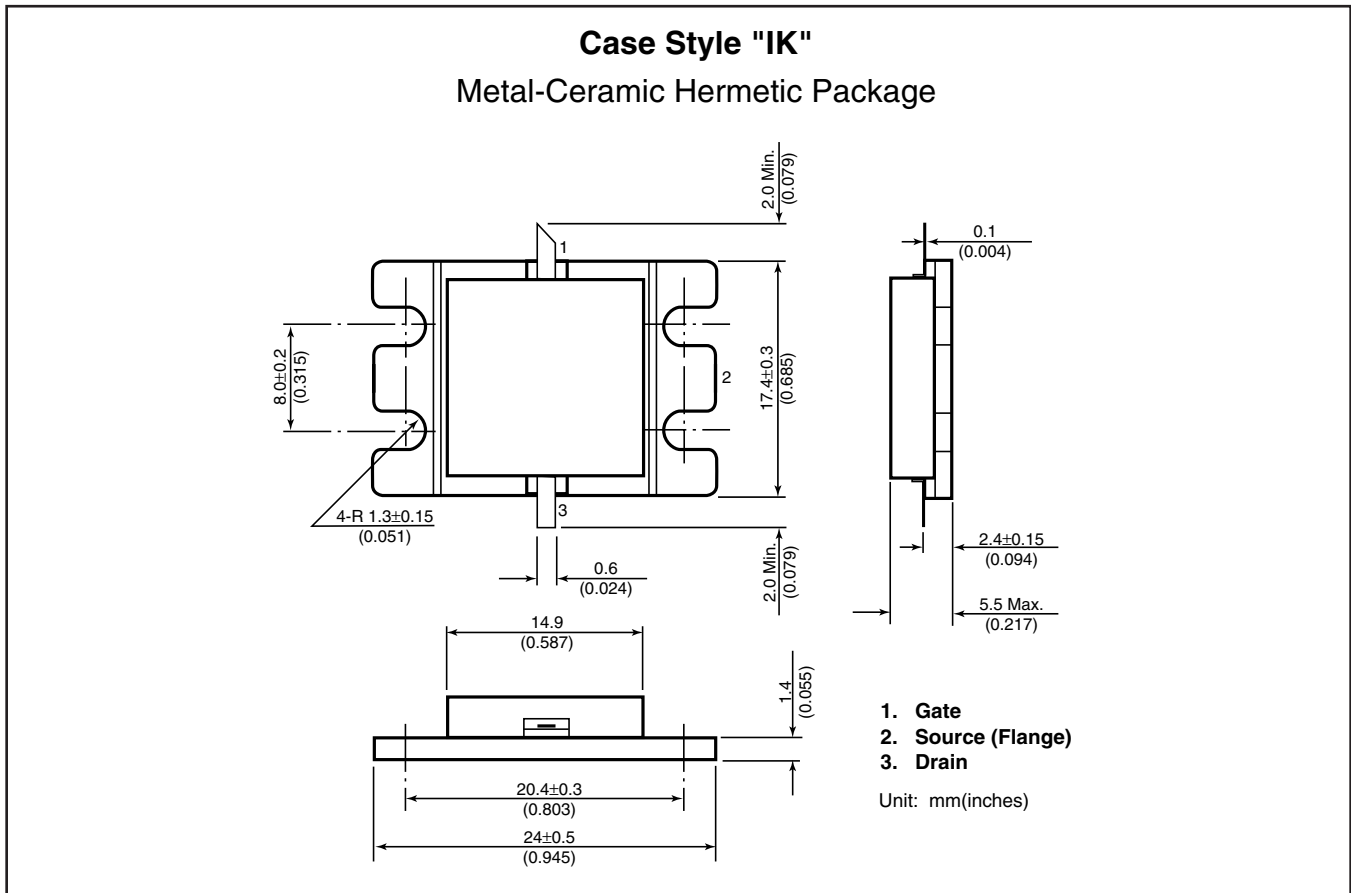
### S-PARAMETERS

$V_{DS} = 10V, I_{DS} = 3250mA$

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6200	.382	49.0	3.350	-129.3	.059	-170.6	.532	78.1
6300	.355	36.4	3.323	-144.1	.061	179.3	.534	72.0
6400	.324	21.8	3.285	-156.3	.065	166.7	.529	64.5
6500	.289	6.4	3.208	-170.5	.069	153.8	.522	55.2
6600	.256	-13.3	3.219	174.9	.073	140.1	.508	43.6
6700	.224	-34.8	3.184	161.3	.077	125.3	.482	30.0
6800	.204	-61.3	3.168	146.8	.079	110.5	.450	14.4
6900	.191	-92.0	3.165	131.9	.082	95.0	.412	-3.1
7000	.202	-124.3	3.169	116.4	.083	78.3	.376	-22.0
7100	.229	-156.9	3.153	101.6	.080	64.9	.339	-39.8
7200	.285	174.6	3.112	84.6	.076	47.6	.299	-59.5
7300	.359	148.6	3.034	67.0	.072	29.8	.261	-78.6
7400	.444	126.2	2.899	48.5	.068	15.9	.224	-98.5

# FLM6472-12F

## 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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