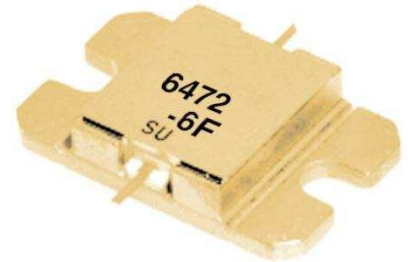


### FEATURES

- High Output Power:  $P_{1dB} = 38.5\text{dBm}$  (Typ.)
- High Gain:  $G_{1dB} = 9.5\text{dB}$  (Typ.)
- High PAE:  $\eta_{add} = 37\%$  (Typ.)
- Low IM3 =  $-46\text{dBc}@P_o = 27.5\text{dBm}$
- Broad Band: 6.4 to 7.2GHz
- Impedance Matched  $Z_{in}/Z_{out} = 50\text{ohm}$
- 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.

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

### ABSOLUTE MAXIMUM RATING (Case Temperature $T_c=25\text{deg.C}$ )

Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	$V_{DS}$		15	V
Gate-Source Voltage	$V_{GS}$		-5	V
Total Power Dissipation	$P_T$	$T_c = 25\text{deg.C}$	31.2	W
Storage Temperature	$T_{stg}$		-65 to +175	deg.C
Channel Temperature	$T_{ch}$		175	deg.C

SEDI 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 100ohm.

### ELECTRICAL CHARACTERISTICS (Case Temperature $T_c=25\text{deg.C}$ )

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	$I_{DSS}$	$V_{DS}=5V, V_{GS}=0V$	-	2500	3750	mA
Transconductance	$g_m$	$V_{DS}=5V, I_{DS}=1625\text{mA}$	-	2500	-	mS
Pinch-off Voltage	$V_p$	$V_{DS}=5V, I_{DS}=125\text{mA}$	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	$V_{GSO}$	$I_{GS}=-125\text{uA}$	-5.0	-	-	V
Output Power at 1dB G.C.P.	$P_{1dB}$	$V_{DS}=10V,$ $I_{DS}=0.65 I_{DSS}$ (Typ.), $f=6.4$ to $7.2$ GHz, $Z_S=Z_L=50\text{ohm}$	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	$\eta_{add}$		-	37	-	%
Gain Flatness	$\Delta G$		-	-	1.2	dB
3rd Order Intermodulation Distortion	$IM_3$	$f = 7.2$ GHz, $\Delta f = 10$ MHz 2-Tone Test $P_{out} = 27.5\text{dBm}$ S.C.L.	-44	-46	-	dBc
Thermal Resistance	$R_{th}$	Channel to Case	-	4.0	4.8	deg.C/W
Channel Temperature Rise	$\Delta T_{ch}$	$10V \times I_{dsr} \times R_{th}$	-	-	80	deg.C

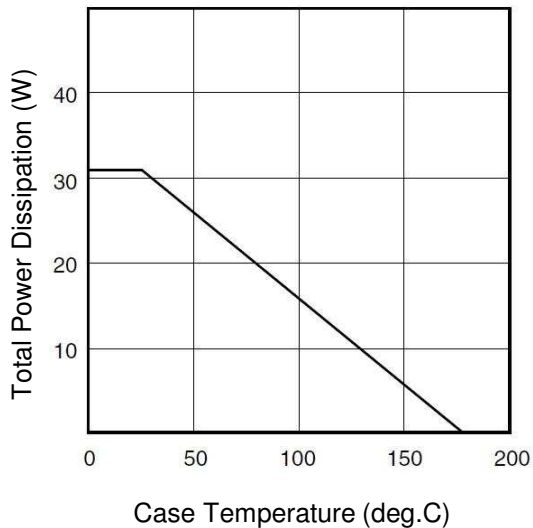
G.C.P.: Gain Compression Point, S.C.L.: Single Carrier Level

CASE STYLE	IB	
ESD	Class 3A	4000V to 8000V

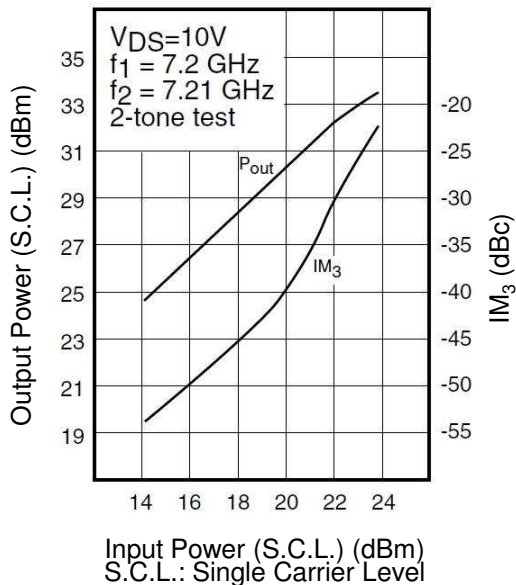
Note : Based on JEDEC JESD22-A114 (C=100pF, R=1.5kohm)

RoHS Compliance	Yes
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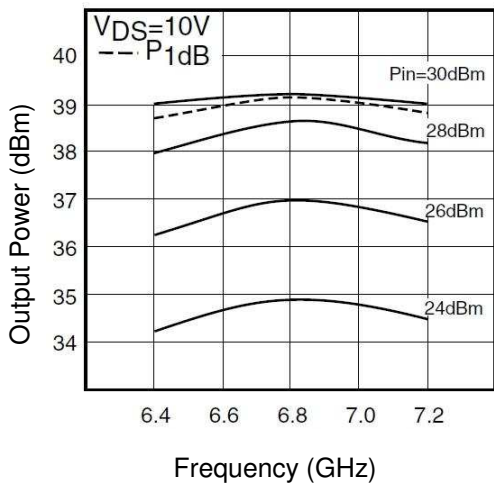
### POWER DERATING CURVE



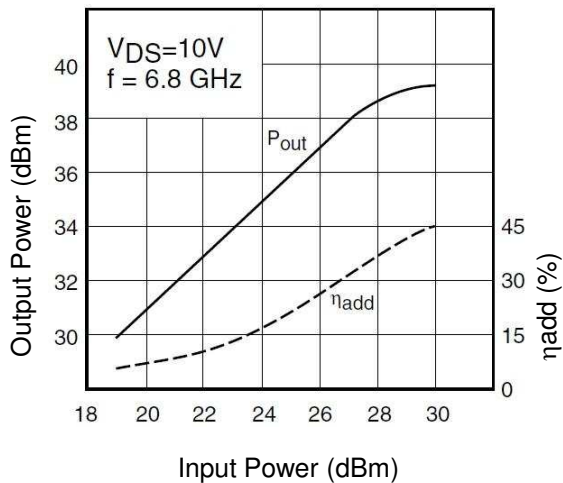
### OUTPUT POWER & IM<sub>3</sub> vs. INPUT POWER

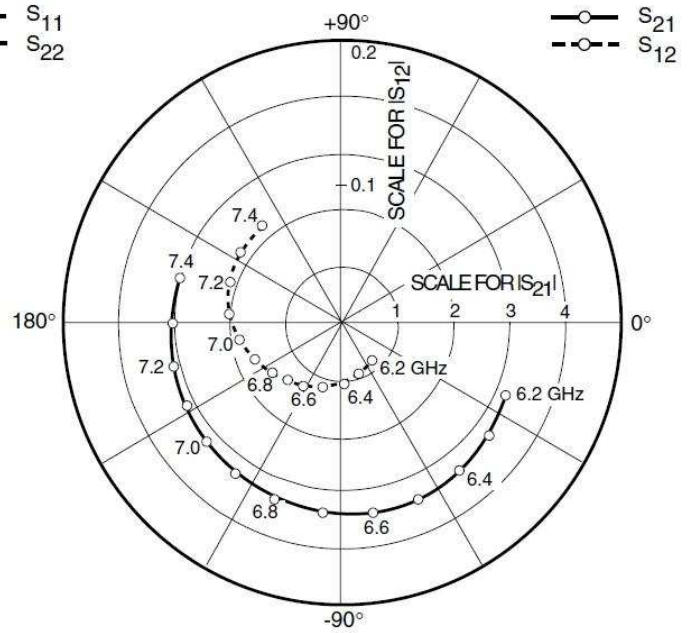
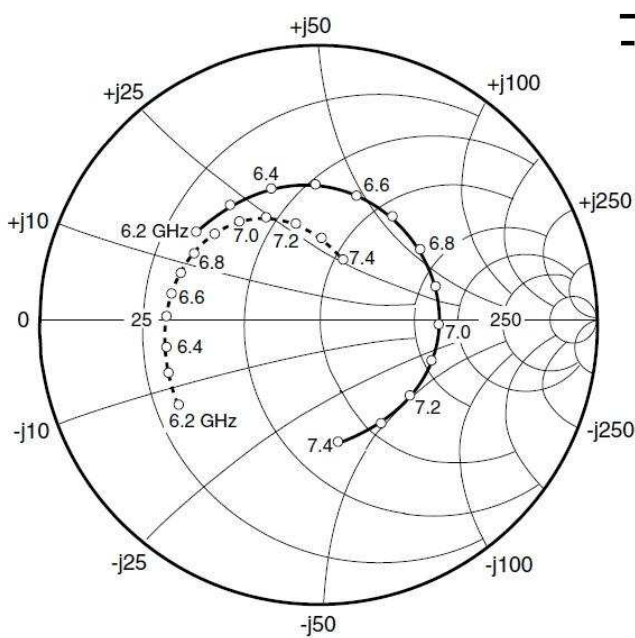


### OUTPUT POWER vs. FREQUENCY



### OUTPUT POWER vs. INPUT POWER



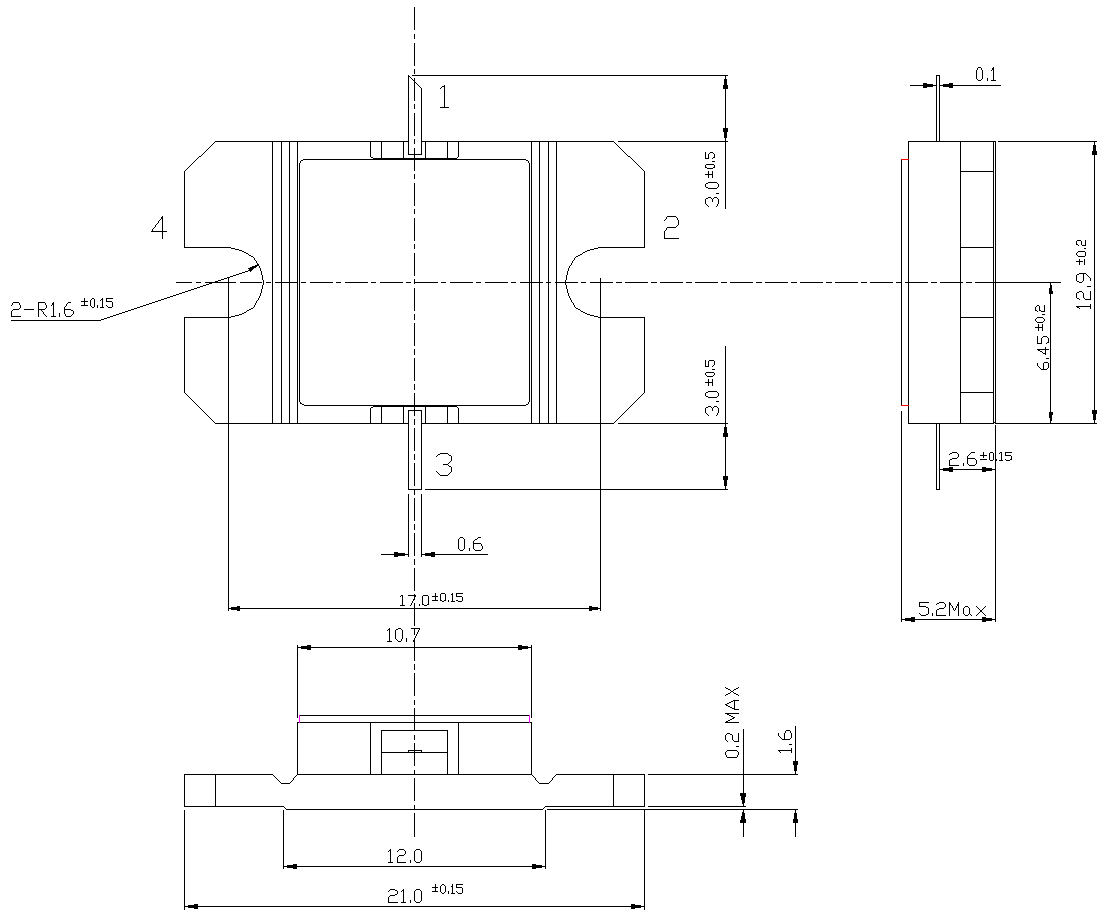


### S-PARAMETERS

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

FREQUENCY (MHz)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6200	0.539	144.1	3.216	-24.3	0.034	-53.7	0.588	-149.8
6300	0.521	127.1	3.305	-37.9	0.039	-73.7	0.574	-161.0
6400	0.507	109.4	3.354	-52.0	0.044	-91.6	0.560	-171.3
6500	0.490	91.3	3.413	-66.7	0.049	-107.9	0.547	179.3
6600	0.474	72.5	3.438	-81.0	0.054	-122.4	0.538	170.2
6700	0.462	53.7	3.410	-96.0	0.058	-134.3	0.529	161.2
6800	0.451	34.7	3.374	-110.8	0.063	-145.4	0.514	151.5
6900	0.442	16.2	3.309	-125.4	0.069	-158.2	0.493	140.8
7000	0.435	-1.9	3.232	-139.2	0.076	-171.4	0.461	129.3
7100	0.431	-19.1	3.159	-152.1	0.083	175.6	0.421	117.2
7200	0.429	-38.0	3.124	-166.0	0.086	160.9	0.367	103.9
7300	0.432	-57.9	3.079	179.9	0.088	146.8	0.301	88.4
7400	0.441	-78.9	3.035	164.7	0.090	130.5	0.234	70.5

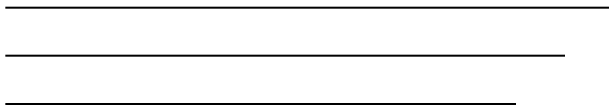
■ Package Outline  
Case Style : IB



Pin Assignment

- 1 : Gate
- 2 : Source
- 3 : Drain
- 4 : Source

Unit : mm



**FLM6472-6F**

***C-Band Internally Matched FET***

**For further information please contact:**

**<http://global-sei.com/Electro-optic/about/office.html>**

**CAUTION**

This product contains **gallium arsenide (GaAs)** which can be hazardous to the human body and the environment. For safety, observe the following procedures:

- 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.