

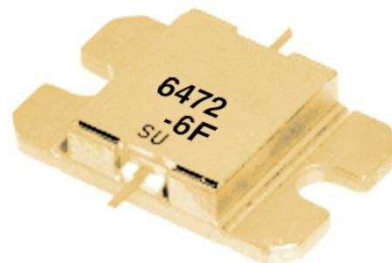
FEATURES

- 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: $-46\text{dBc@Po} = 27.5\text{dBm}$
- 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.

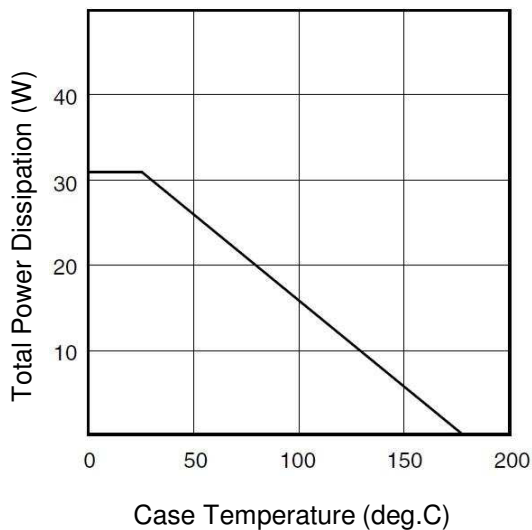
ELECTRICAL CHARACTERISTICS (Case Temperature $T_c=25\text{deg.C}$)

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}	$I_{GS}=-125\mu A$	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS}=10V,$ $I_{DS}=0.65 I_{DSS}$ (Typ.), $f=6.4$ 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	η_{add}		-	37	-	%
Gain Flatness	ΔG		-	-	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	ΔT_{ch}	$10V \times I_{dsr} \times R_{th}$	-	-	80	deg.C

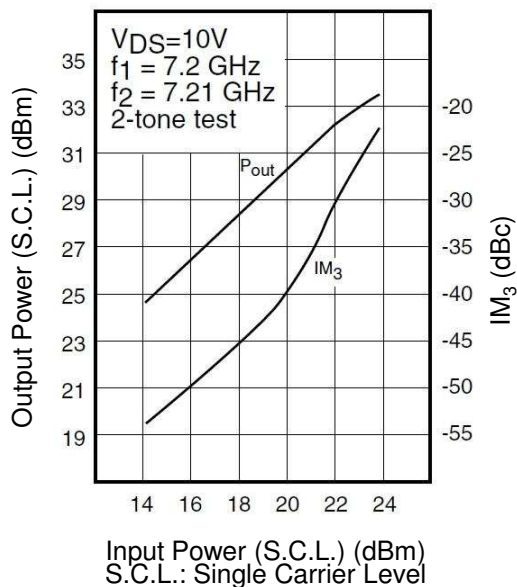
G.C.P.: Gain Compression Point, S.C.L.: Single Carrier Level

CASE STYLE	IB	
ESD	Class 3A	4000V to 8000V
Note : Based on JEDEC JESD22-A114 (C=100pF, R=1.5kohm)		
RoHS Compliance	Yes	

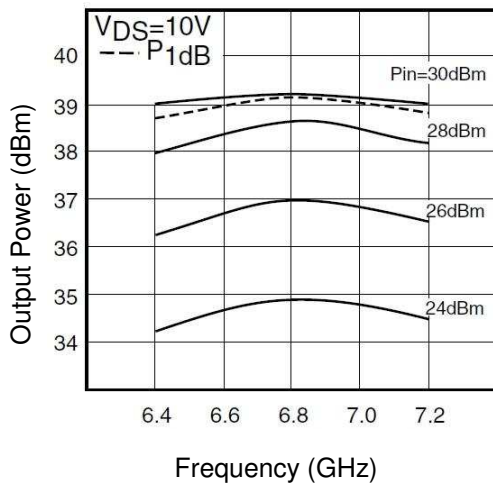
POWER DERATING CURVE



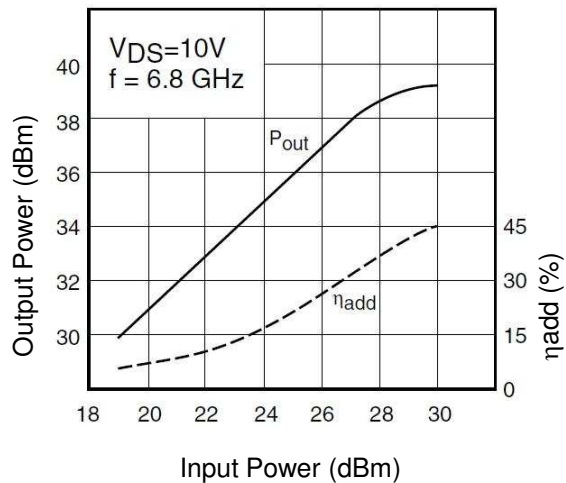
OUTPUT POWER & IM_3 vs. INPUT POWER

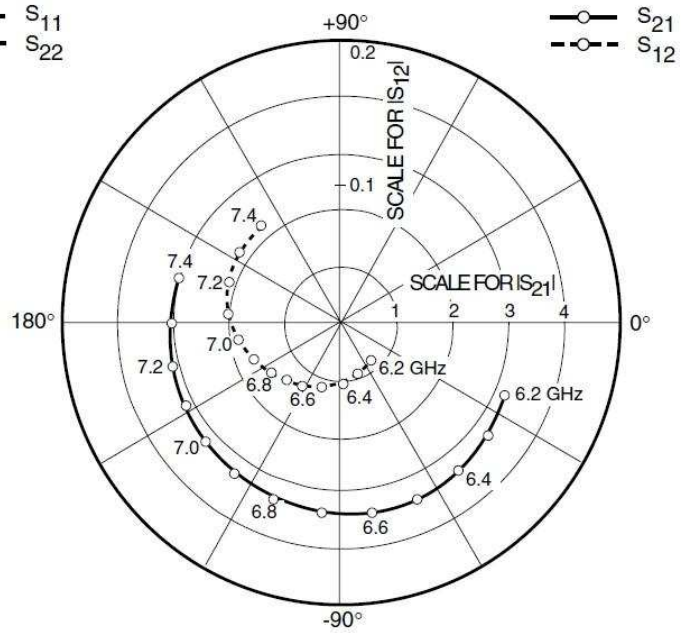
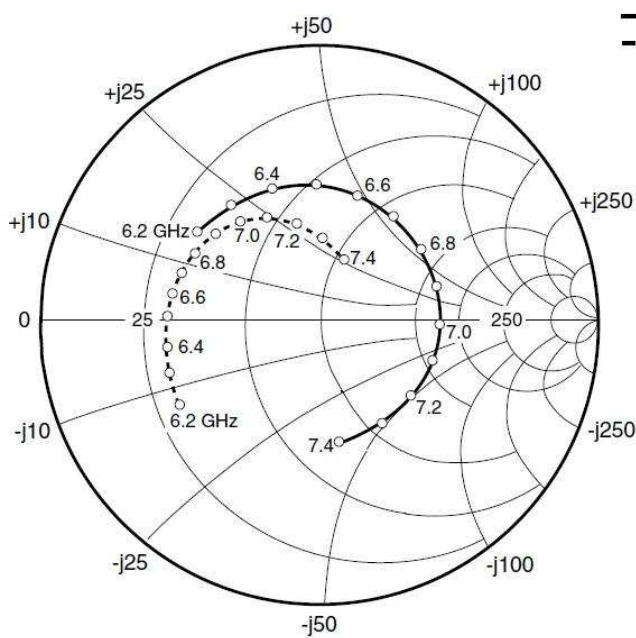


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER



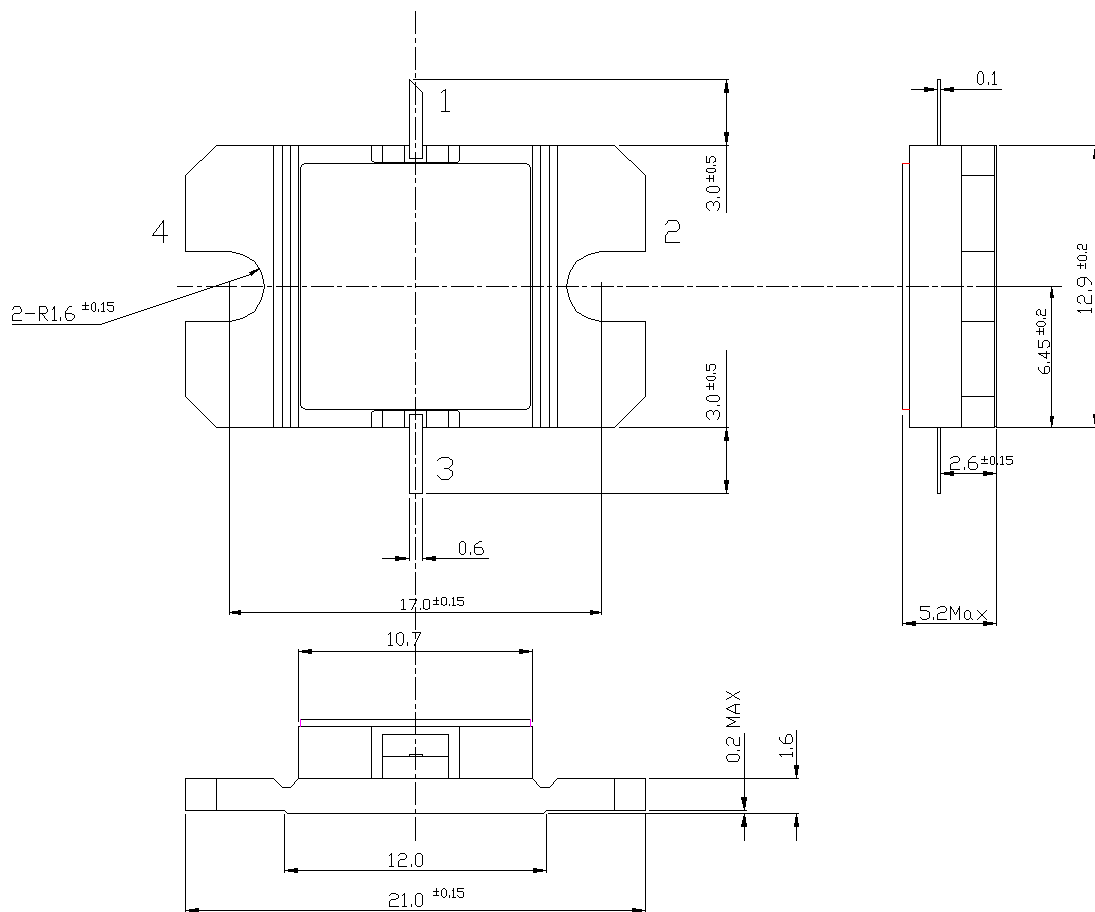


S-PARAMETERS

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

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

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.