

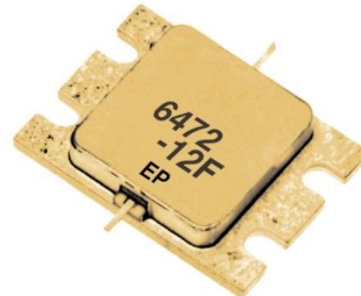
FEATURES

- 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 IM3 = $-46\text{dBc}@P_o = 30.5\text{dBm}$
- Broad Band: 6.4 to 7.2GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\text{ohm}$
- Hermetically Sealed Package

DESCRIPTION

The FLM6472-12F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system.

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	$T_c = 25\text{deg.C}$	57.6	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 32.0 and -5.6 mA respectively with gate resistance of 50ohm.

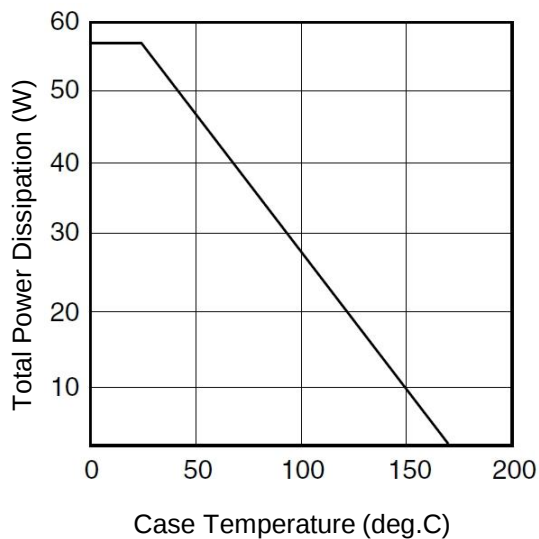
ELECTRICAL CHARACTERISTICS (Case Temperature $T_c=25\text{deg.C}$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS}=5V, V_{GS}=0V$	-	5000	7500	mA
Transconductance	g_m	$V_{DS}=5V, I_{DS}=3250\text{mA}$	-	5000	-	mS
Pinch-off Voltage	V_p	$V_{DS}=5V, I_{DS}=250\text{mA}$	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	V_{GSO}	$I_{GS}=-250\text{uA}$	-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, $Z_S=Z_L=50\text{ohm}$	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	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 $P_{out} = 30.5\text{dBm}$ S.C.L.	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	2.3	2.6	deg.C/W
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{DSR} \times R_{th}$	-	-	80	deg.C

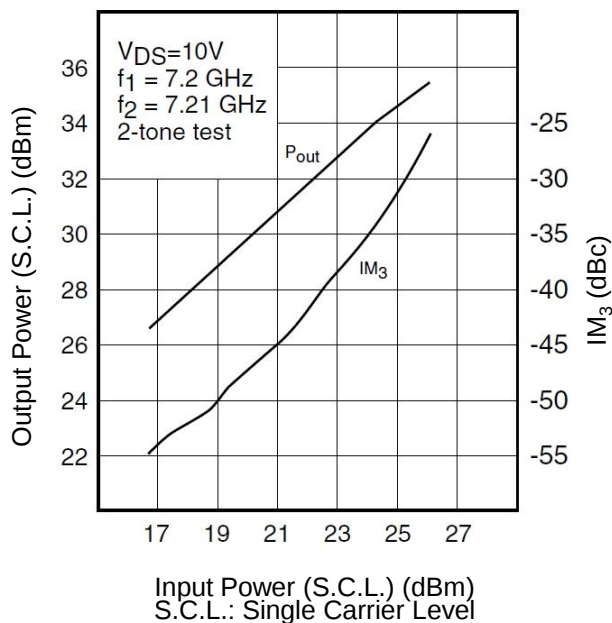
G.C.P.: Gain Compression Point, S.C.L.: Single Carrier Level

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

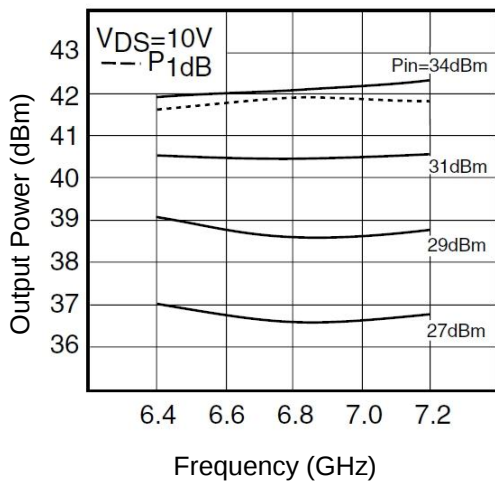
POWER DERATING CURVE



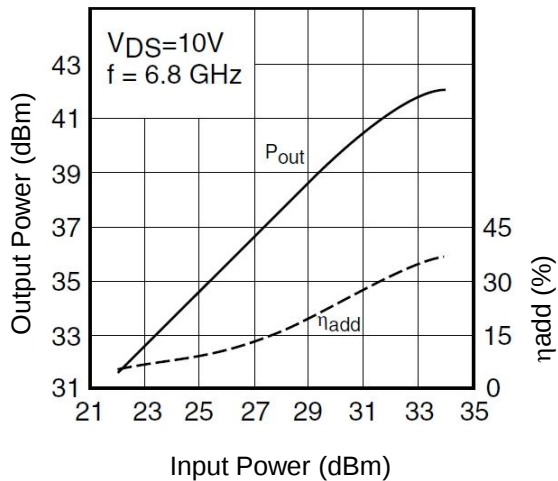
OUTPUT POWER & IM_3 vs. INPUT POWER

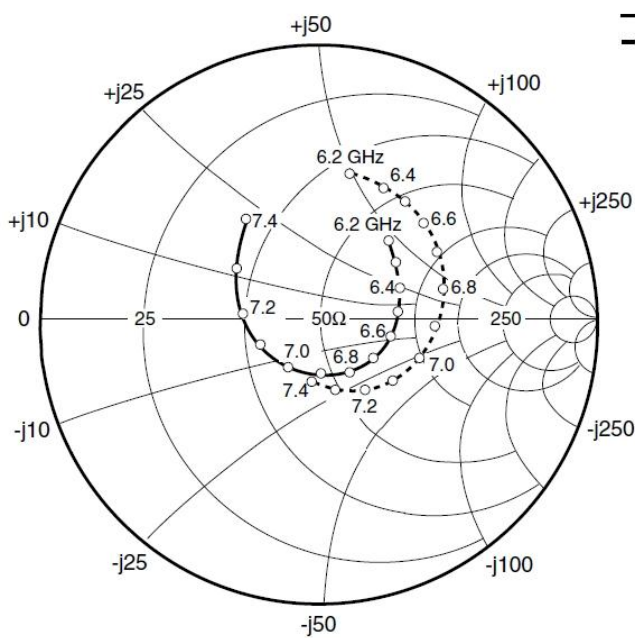


OUTPUT POWER vs. FREQUENCY

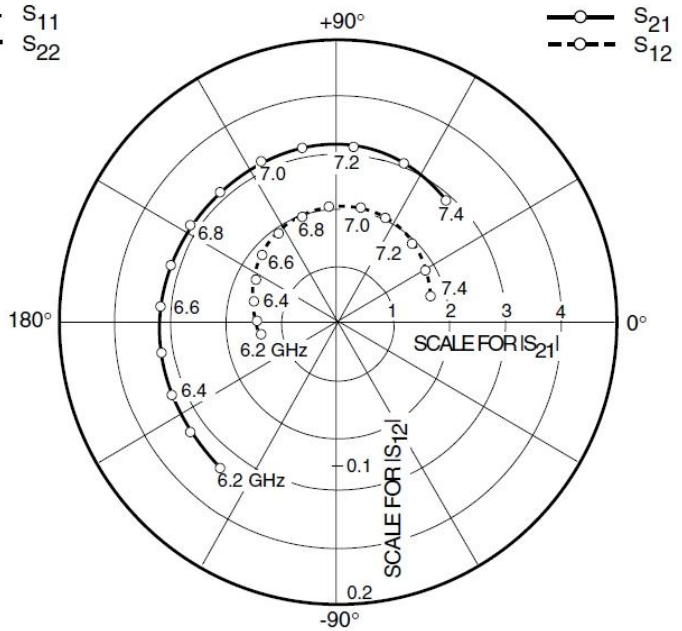


OUTPUT POWER vs. INPUT POWER





—○— S_{11}
- -○- - S_{22}



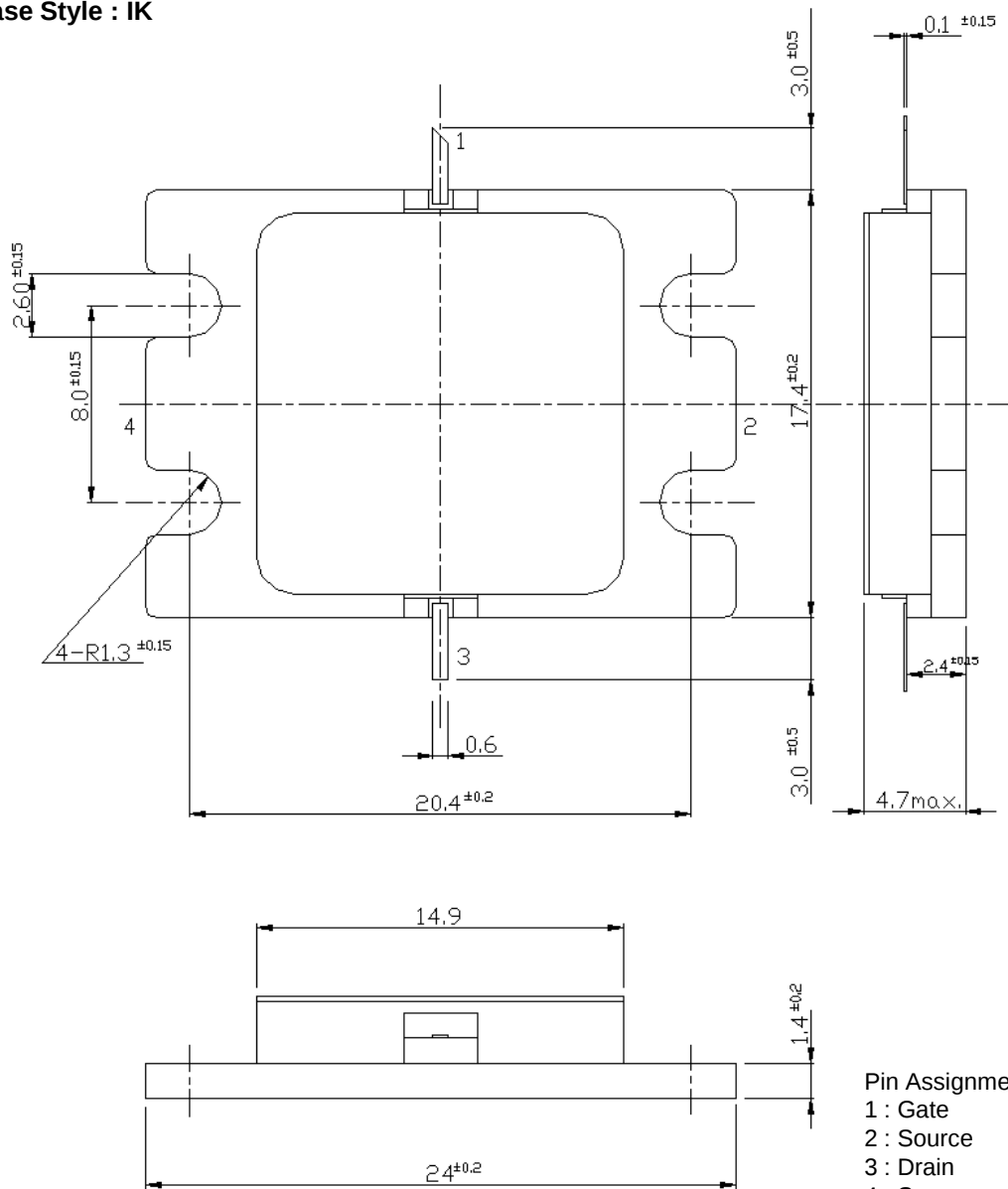
—○— S_{21}
- -○- - S_{12}

S-PARAMETERS

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

FREQUENCY (MHz)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6200	0.382	49.0	3.350	-129.3	0.059	-170.6	0.532	78.1
6300	0.355	36.4	3.323	-144.1	0.061	179.3	0.534	72.0
6400	0.324	21.8	3.285	-156.3	0.065	166.7	0.529	64.5
6500	0.289	6.4	3.208	-170.5	0.069	153.8	0.522	55.2
6600	0.256	-13.3	3.219	174.9	0.073	140.1	0.508	43.6
6700	0.224	-34.8	3.184	161.3	0.077	125.3	0.482	30.0
6800	0.204	-61.3	3.168	146.8	0.079	110.5	0.450	14.4
6900	0.191	-92.0	3.165	131.9	0.082	95.0	0.412	-3.1
7000	0.202	-124.3	3.169	116.4	0.083	78.3	0.376	-22.0
7100	0.229	-156.9	3.153	101.6	0.080	64.9	0.339	-39.8
7200	0.285	174.6	3.112	84.6	0.076	47.6	0.299	-59.5
7300	0.359	148.6	3.034	67.0	0.072	29.8	0.261	-78.6
7400	0.444	126.2	2.899	48.5	0.068	15.9	0.224	-98.5

■ Package Outline
Case Style : IK



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.