

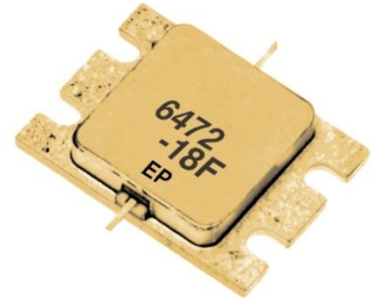
FEATURES

- High Output Power: $P_{1dB} = 43.0\text{dBm}$ (Typ.)
- High Gain: $G_{1dB} = 9.5\text{dB}$ (Typ.)
- High PAE: $\eta_{add} = 37\%$ (Typ.)
- Low IM3 = $-46\text{dBc}@P_o = 32.0\text{dBm}$
- Broad Band: 6.4 to 7.2GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\text{ohm}$
- Hermetically Sealed Package

DESCRIPTION

The FLM6472-18F 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	$T_c = 25\text{deg.C}$	83.3	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 48.0 and -8.4 mA respectively with gate resistance of 25ohm.

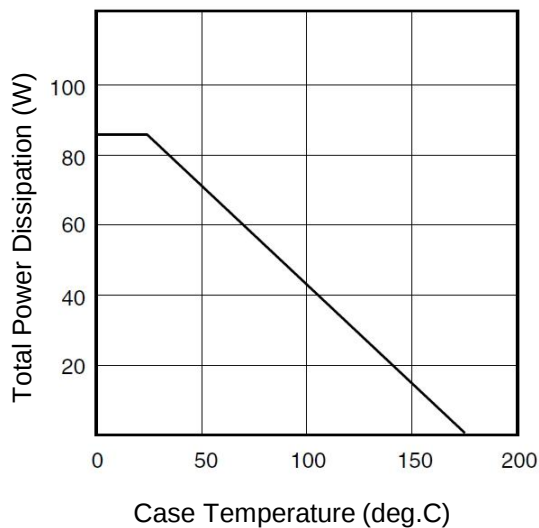
ELECTRICAL CHARACTERISTICS (Case Temperature $T_c=25\text{deg.C}$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS}=5V, V_{GS}=0V$	-	7.5	11.25	A
Transconductance	g_m	$V_{DS}=5V, I_{DS}=4875\text{mA}$	-	7500	-	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, $Z_S=Z_L=50\text{ohm}$	42.0	43.0	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		8.5	9.5	-	dB
Drain Current	I_{DSR}		-	4875	6000	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 $P_{out} = 32.0\text{dBm S.C.L.}$	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	1.6	1.8	deg.C/W
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{DSR} \times R_{th}$	-	-	80	deg.C

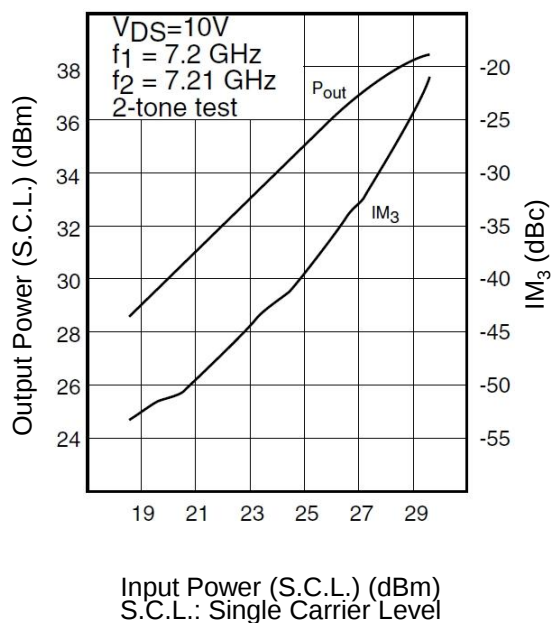
G.C.P.: Gain Compression Point, S.C.L.: Single Carrier Level

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

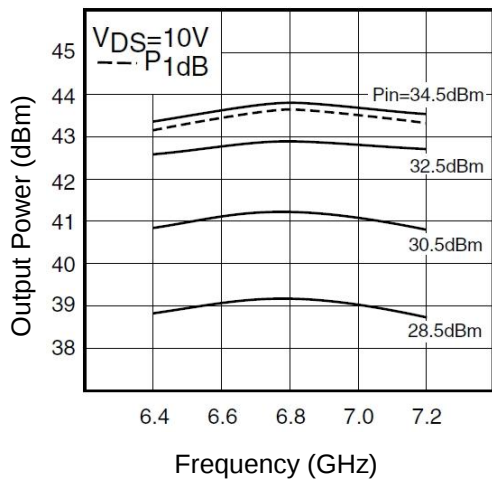
POWER DERATING CURVE



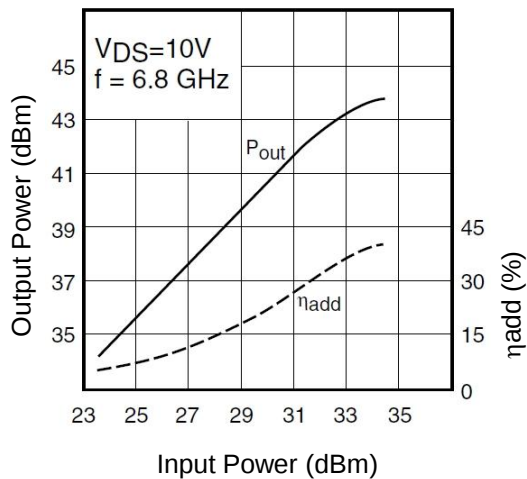
OUTPUT POWER & IM_3 vs. INPUT POWER

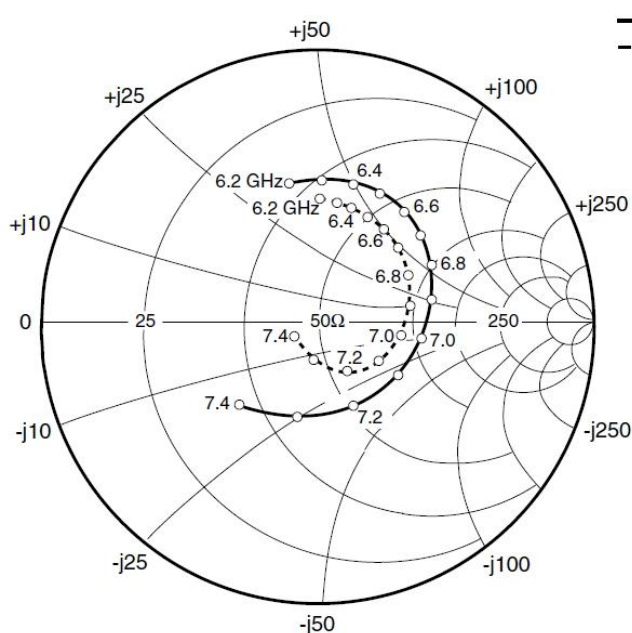


OUTPUT POWER vs. FREQUENCY

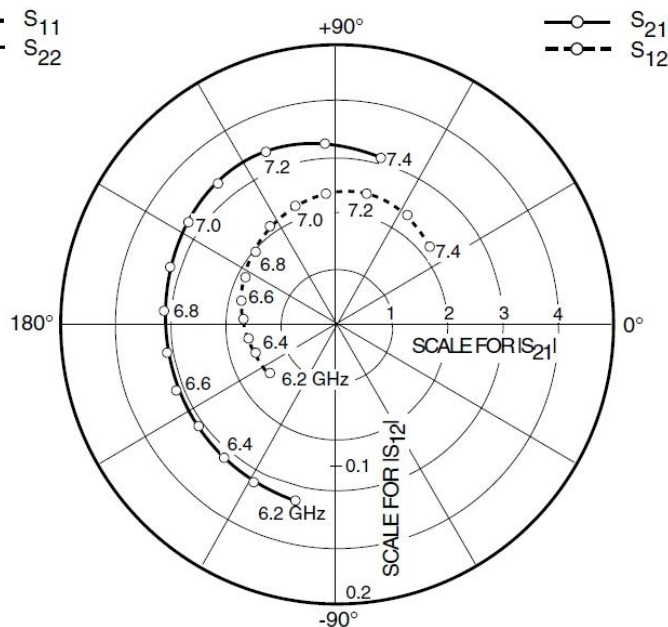


OUTPUT POWER vs. INPUT POWER





—○— S_{11}
- -○- - S_{22}



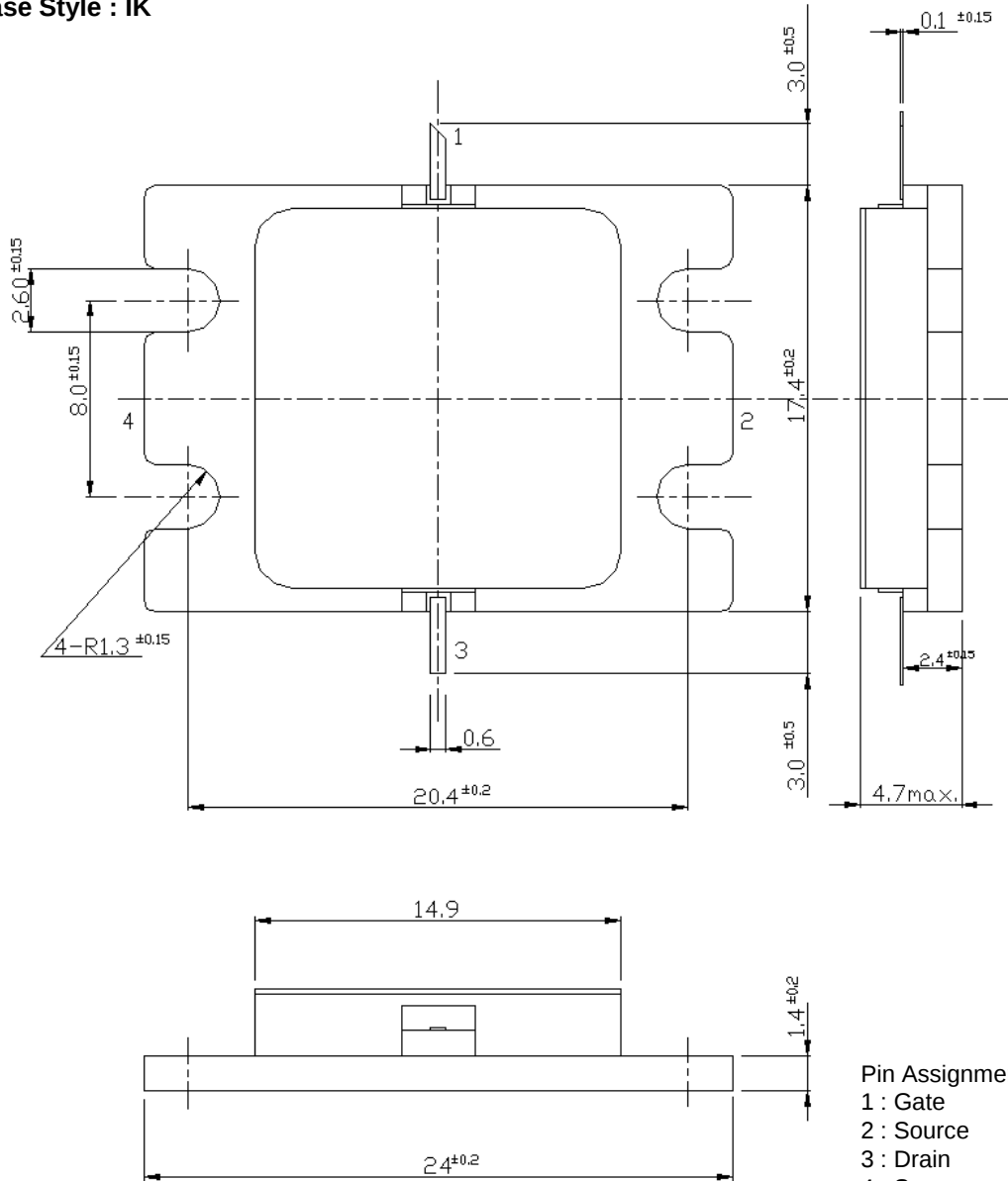
—○— S_{21}
- -○- - S_{12}

S-PARAMETERS

$V_{DS} = 10V$, $I_{DS} = 4875mA$

FREQUENCY (MHz)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6200	0.517	101.5	3.232	-103.7	0.062	-144.7	0.453	89.3
6300	0.521	88.0	3.197	-118.5	0.064	-159.2	0.445	81.8
6400	0.524	75.7	3.135	-130.9	0.066	-170.7	0.432	74.0
6500	0.519	64.3	3.075	-144.6	0.068	-176.9	0.424	65.8
6600	0.507	52.6	3.108	-158.3	0.071	164.6	0.410	55.5
6700	0.490	40.7	3.111	-171.2	0.074	152.8	0.391	43.5
6800	0.463	27.1	3.149	175.1	0.079	139.3	0.369	28.7
6900	0.426	11.1	3.226	160.5	0.086	125.2	0.339	11.3
7000	0.385	-9.3	3.308	145.2	0.090	110.1	0.301	-9.4
7100	0.345	-33.6	3.366	129.9	0.094	95.4	0.259	-31.8
7200	0.326	-66.5	3.378	112.2	0.096	77.0	0.202	-59.4
7300	0.349	-102.2	3.287	93.9	0.092	57.5	0.141	-95.5
7400	0.411	-134.0	3.133	75.3	0.087	39.6	0.098	-149.0

■ Package Outline
Case Style : IK



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.