

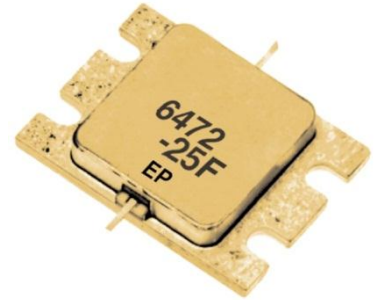
FEATURES

- High Output Power: $P_{1dB} = 44.5\text{dBm}$ (Typ.)
- High Gain: $G_{1dB} = 9.5\text{dB}$ (Typ.)
- High PAE: $\eta_{add} = 38\%$ (Typ.)
- Low IM3: $-46\text{dBc}@P_o = 33.5\text{dBm}$
- Broad Band: 6.4 to 7.2GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\text{ohm}$
- Hermetically Sealed Package

DESCRIPTION

The FLM6472-25F 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	$T_c = 25\text{deg.C}$	93.7	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 64.0 and -11.2 mA respectively with gate resistance of 25ohm.

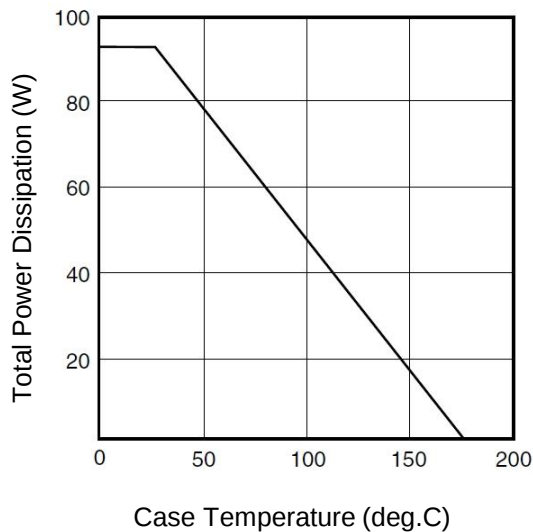
ELECTRICAL CHARACTERISTICS (Case Temperature $T_c=25\text{deg.C}$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS}=5V, V_{GS}=0V$	-	10	15	A
Transconductance	g_m	$V_{DS}=5V, I_{DS}=6500\text{mA}$	-	10	-	S
Pinch-off Voltage	V_p	$V_{DS}=5V, I_{DS}=500\text{mA}$	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	V_{GSO}	$I_{GS}=-500\text{uA}$	-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, $Z_S=Z_L=50\text{ohm}$	43.5	44.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		8.5	9.5	-	dB
Drain Current	I_{dsr}		-	6500	7600	mA
Power-added Efficiency	η_{add}		-	38	-	%
Gain Flatness	ΔG		-	-	1.2	dB
3rd Order Intermodulation Distortion	IM_3	$f = 7.2$ GHz, $\Delta f = 10$ MHz 2-Tone Test $P_{out} = 33.5\text{dBm S.C.L.}$	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	1.4	1.6	deg.C/W
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{dsr} \times R_{th}$	-	-	80	deg.C

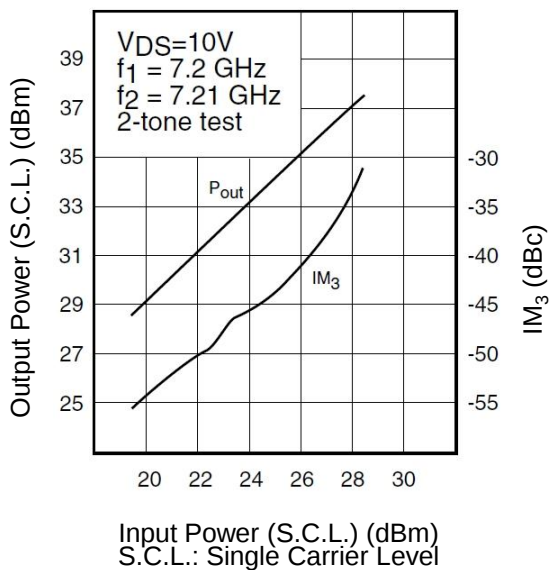
G.C.P.: Gain Compression Point, S.C.L.: Single Carrier Level

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

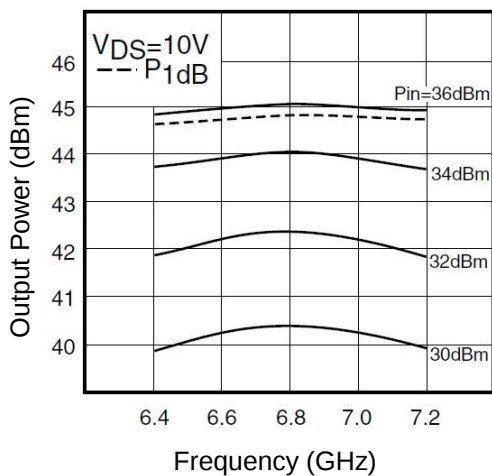
POWER DERATING CURVE



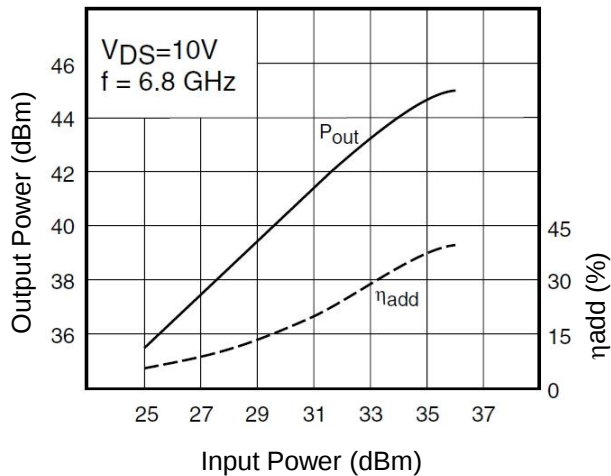
OUTPUT POWER & IM_3 vs. INPUT POWER

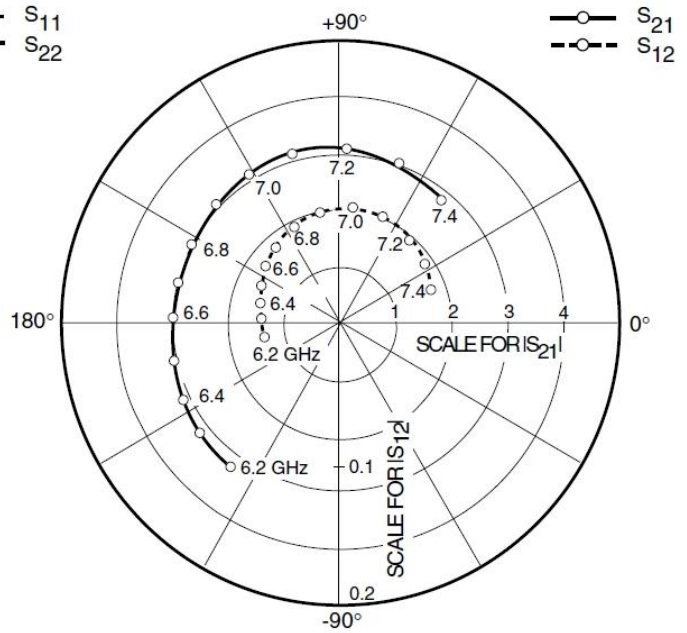
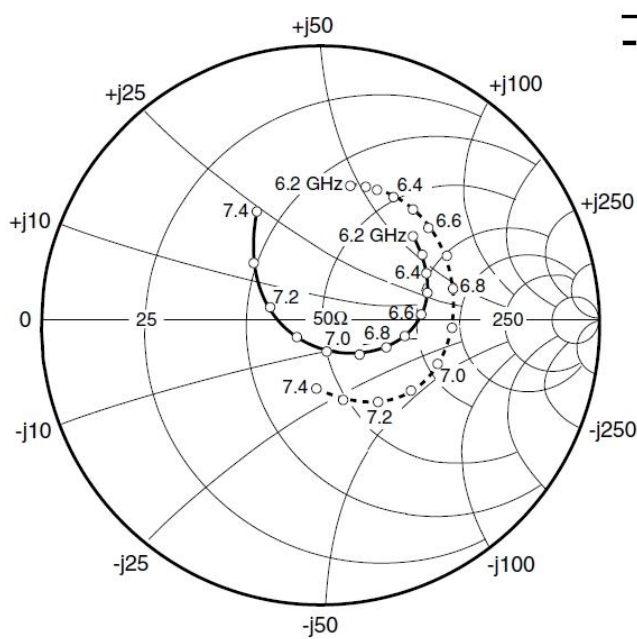


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER



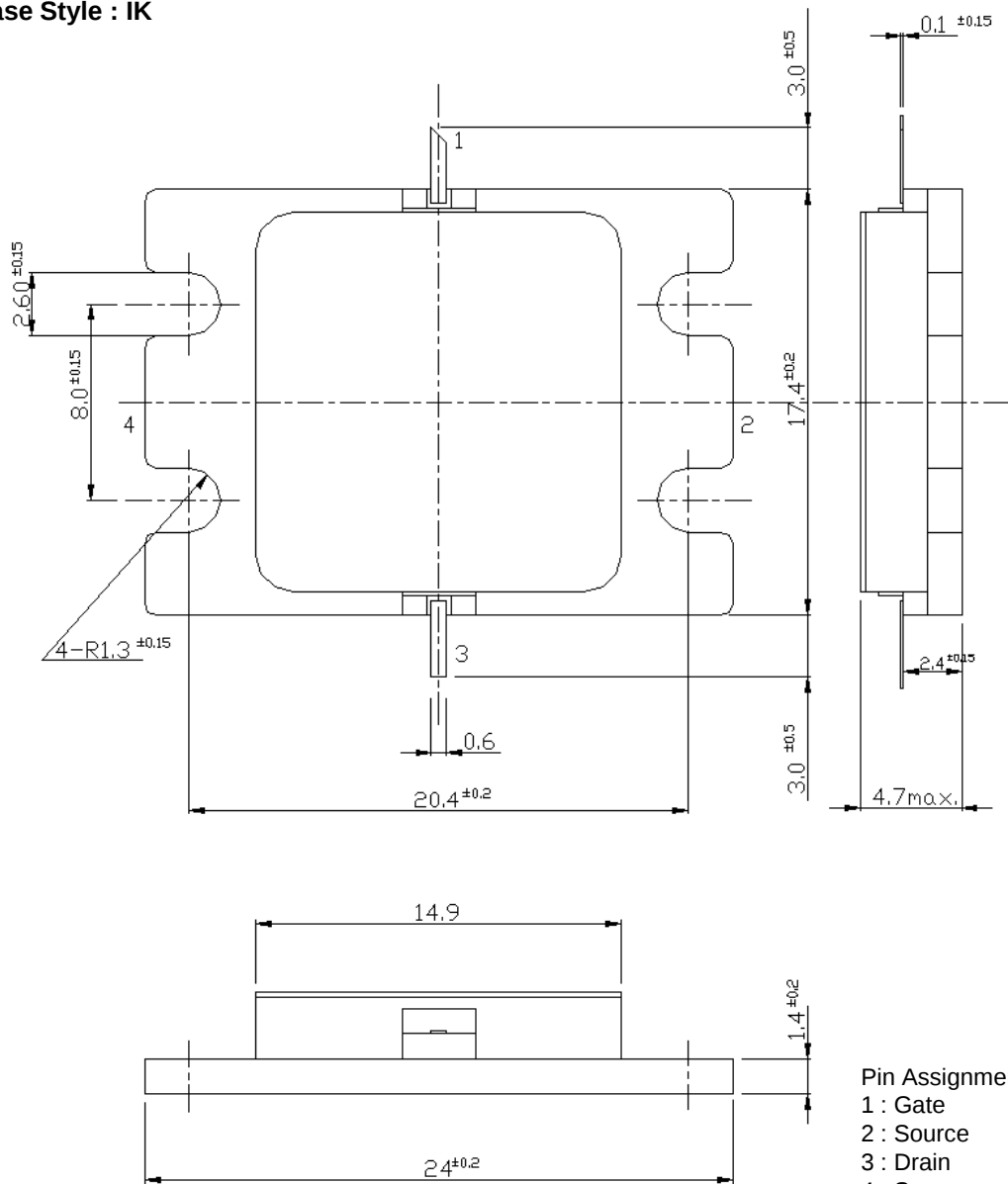


S-PARAMETERS

V_{DS} = 10V, I_{DS} = 6500mA

FREQUENCY (MHz)	S ₁₁		S ₂₁		S ₁₂		S ₂₂	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6200	0.456	42.1	3.198	-129.2	0.057	-169.6	0.510	71.7
6300	0.444	33.6	3.139	-143.1	0.058	179.0	0.512	66.4
6400	0.426	24.4	3.089	-154.7	0.061	167.8	0.512	59.8
6500	0.397	15.3	3.018	-167.8	0.064	156.1	0.513	51.4
6600	0.358	4.4	3.044	178.4	0.069	144.0	0.512	41.3
6700	0.312	-6.6	3.038	165.6	0.071	131.3	0.502	28.9
6800	0.254	-21.0	3.063	151.7	0.076	117.2	0.488	14.6
6900	0.183	-40.2	3.101	136.9	0.079	101.6	0.466	-1.8
7000	0.114	-77.1	3.148	121.1	0.081	84.6	0.437	-19.7
7100	0.104	-149.7	3.164	105.9	0.082	68.7	0.401	-37.0
7200	0.195	164.3	3.139	88.1	0.076	53.1	0.354	-55.3
7300	0.325	138.9	3.042	69.6	0.073	32.7	0.298	-74.2
7400	0.454	120.5	2.871	50.6	0.069	19.4	0.238	-93.9

■ 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.