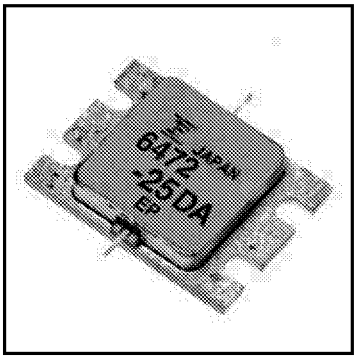
FLM6472-25DA
Internally Matched Power GaAs FETs

FUJITSU

FEATURES



- High Output Power: P_{1dB} = 44dBm (Typ.)
- High Gain: G_{1dB} = 7.0dB (Typ.)
- High PAE: η_{add} = 32% (Typ.)
- Low IM_3 = -45dBc@Po = 32dBm
- Broad Band: 6.4 ~ 7.2GHz
- Impedance Matched Zin/Zout = 50Ω
- Hermetically Sealed Package

DESCRIPTION

The FLM6472-25DA is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system.

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

ABSOLUTE MAXIMUM RATING (Ambient Temperature Ta=25°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°C	93.7	W
Storage Temperature	T_{stg}		-65 to +175	°C
Channel Temperature	T_{ch}		175	°C

Fujitsu 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 24.0 and -11.2 mA respectively with gate resistance of 25Ω.

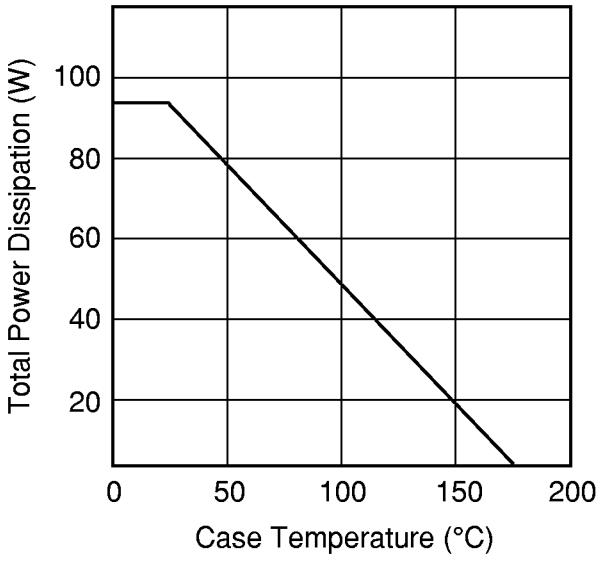
ELECTRICAL CHARACTERISTICS (Ambient Temperature Ta=25°C)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	V_{DS} = 5V, V_{GS} = 0V	-	11.4	17.0	mA
Transconductance	g_m	V_{DS} = 5V, I_{DS} =6800mA	-	5800	-	mS
Pinch-off Voltage	V_p	V_{DS} = 5V, I_{DS} =600mA	-1.0	-2.0	-3.5	V
Gate Source Breakdown Voltage	V_{GSO}	I_{GS} = -600μA	-5	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	V_{DS} =10V, I_{DS} = 0.55 I_{DSS} (Typ.), f = 6.4 ~ 7.2 GHz, Z_S=Z_L=50 ohm	43	44	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		6.0	7.0	-	dB
Drain Current	I_{dsr}		-	6200	7600	mA
Power-added Efficiency	η_{add}		-	32	-	%
Gain Flatness	ΔG		-	-	±0.6	dB
3rd Order Intermodulation Distortion	IM_3	f = 7.2 GHz, Δf = 10 MHz 2-Tone Test P_{out} = 32dBm S.C.L.	-42	-45	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	1.4	1.6	°C/W
Channel Temperature Rise	ΔT_{ch}	10V x I_{dsr} x R_{th}	-	-	100	°C

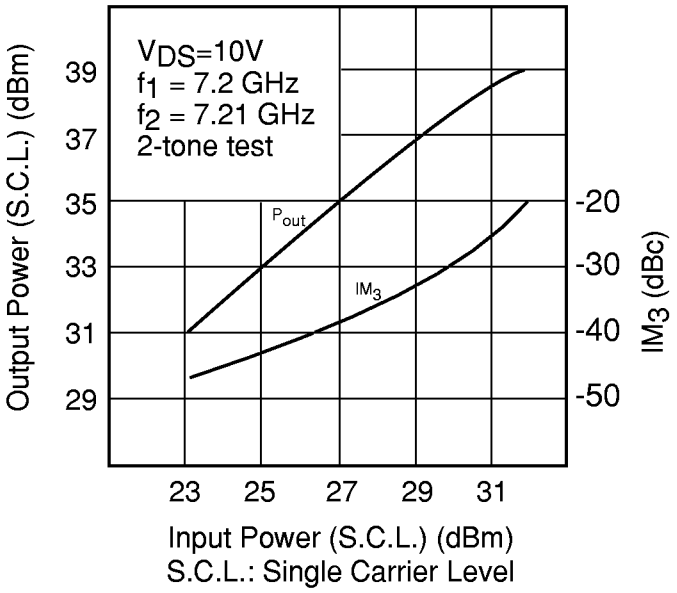
CASE STYLE: IK

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

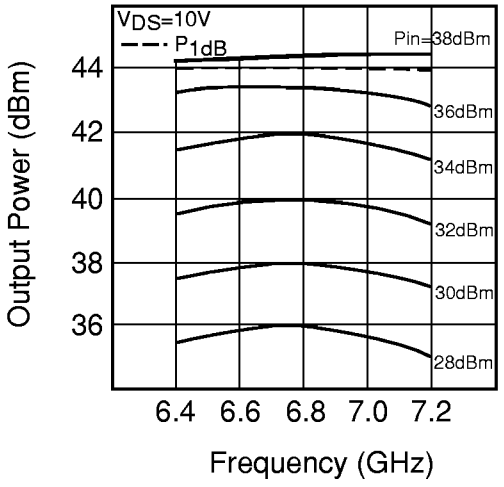
POWER DERATING CURVE



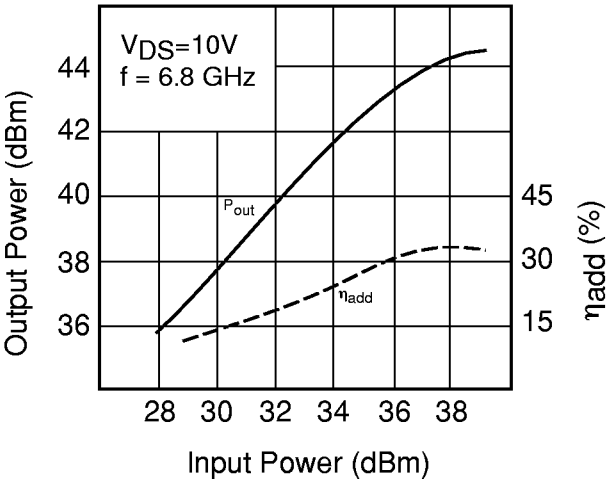
OUTPUT POWER & IM3 vs. INPUT POWER

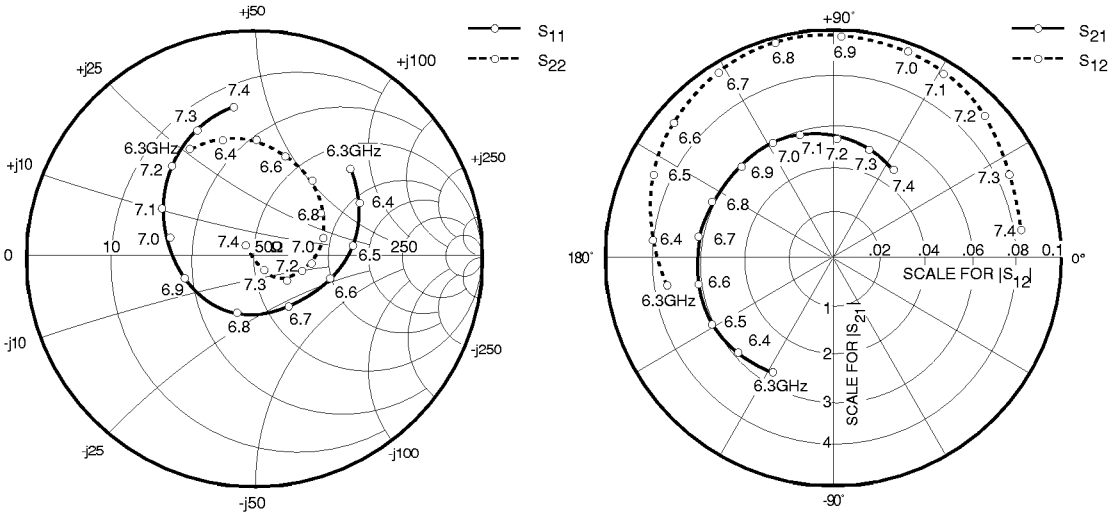


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER





S-PARAMETERS

V_{DS} = 10V, I_{DS} = 6.2A

FREQUENCY	S11		S21		S12		S22	
(MHZ)	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6300	.491	43.1	2.833	-119.1	.074	-170.4	.473	120.5
6400	.420	27.4	2.959	-135.0	.080	174.1	.452	105.2
6500	.335	8.5	3.069	-151.6	.087	156.9	.420	89.1
6600	.243	-16.7	3.154	-169.3	.092	140.6	.373	71.4
6700	.162	-56.8	3.194	172.6	.095	122.6	.324	53.2
6800	.150	-117.8	3.173	154.3	.098	105.0	.266	33.7
6900	.214	-163.9	3.097	136.0	.097	87.3	.214	14.4
7000	.298	167.6	2.999	118.3	.097	69.7	.163	-5.3
7100	.367	151.6	2.899	106.5	.094	58.7	.124	-17.2
7200	.441	132.5	2.765	89.3	.091	42.9	.076	-36.4
7300	.511	114.8	2.619	72.4	.087	25.7	.024	-49.8
7400	.572	97.3	2.456	55.0	.083	9.9	.030	177.5

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Case Style "IK"

Metal-Ceramic Hermetic Package