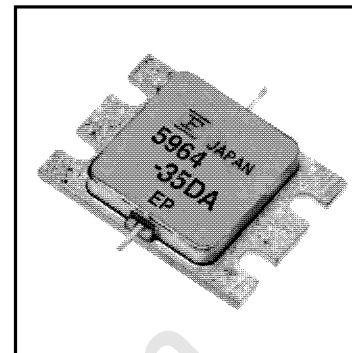


FEATURES

- High Output Power: $P_{1dB} = 45.5\text{dBm}$ (Typ.)
- High Gain: $G_{1dB} = 7.0\text{dB}$ (Typ.)
- High PAE: $\eta_{add} = 35\%$ (Typ.)
- Low $IM_3 = -45\text{dBc}@P_o = 34.5\text{dBm}$
- Broad Band: 5.9 ~ 6.4GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package



DESCRIPTION

The FLM5964-35DA 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 $T_a=25^\circ\text{C}$)

Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}		15	V
Gate-Source Voltage	V_{GS}		-5	V
Total Power Dissipation	P_T	$T_C = 25^\circ\text{C}$	115.4	W
Storage Temperature	T_{stg}		-65 to +175	$^\circ\text{C}$
Channel Temperature	T_{ch}		175	$^\circ\text{C}$

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 26mA and -23.2mA respectively with gate resistance of 10 Ω .

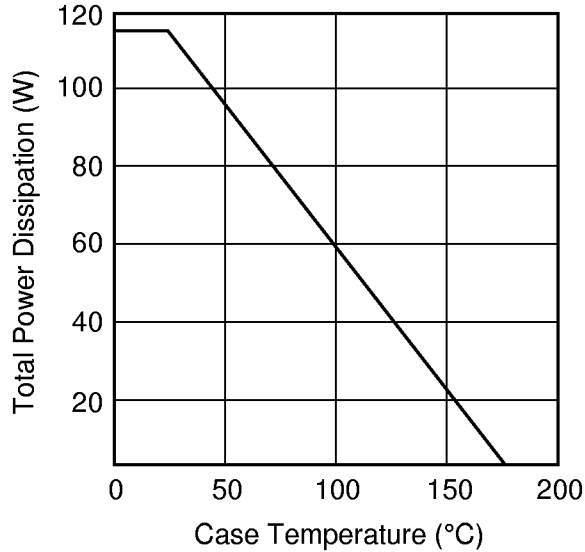
ELECTRICAL CHARACTERISTICS (Ambient Temperature $T_a=25^\circ\text{C}$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}$	-	18.0	26.0	A
Transconductance	g_m	$V_{DS} = 5\text{V}, I_{DS} = 8000\text{mA}$	-	8000	-	mS
Pinch-off Voltage	V_p	$V_{DS} = 5\text{V}, I_{DS} = 960\text{mA}$	-1.0	-2.0	-3.5	V
Gate Source Breakdown Voltage	V_{GSO}	$I_{GS} = -960\mu\text{A}$	-5	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS} = 10\text{V},$ $I_{DS} = 0.55 I_{DSS}$ (Typ.), $f = 5.9 \sim 6.4 \text{GHz},$ $Z_S = Z_L = 50 \text{ohm}$	44.5	45.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		6.0	7.0	-	dB
Drain Current	I_{dsr}		-	8000	9000	mA
Power-added Efficiency	η_{add}		-	35	-	%
Gain Flatness	ΔG		-	-	± 0.6	dB
3rd Order Intermodulation Distortion	IM_3	$f = 6.4 \text{GHz}, \Delta f = 10 \text{MHz}$ 2-Tone Test $P_{out} = 34.5\text{dBm S.C.L.}$	-42	-45	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	1.1	1.3	$^\circ\text{C/W}$
Channel Temperature Rise	ΔT_{ch}	$10\text{V} \times I_{dsr} \times R_{th}$	-	-	100	$^\circ\text{C}$

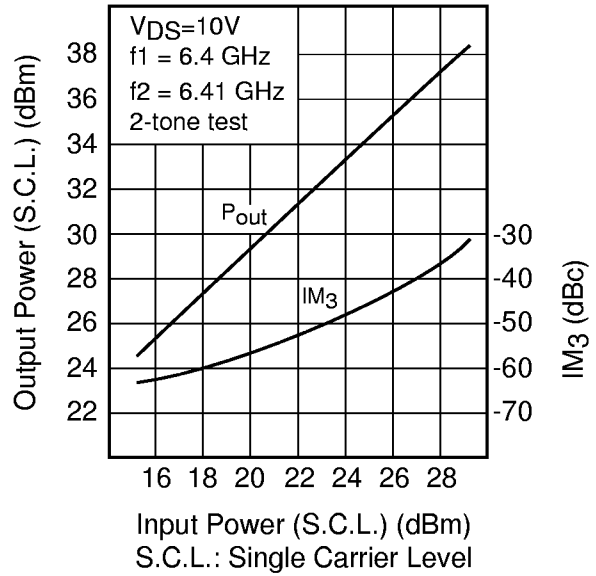
CASE STYLE: IK

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

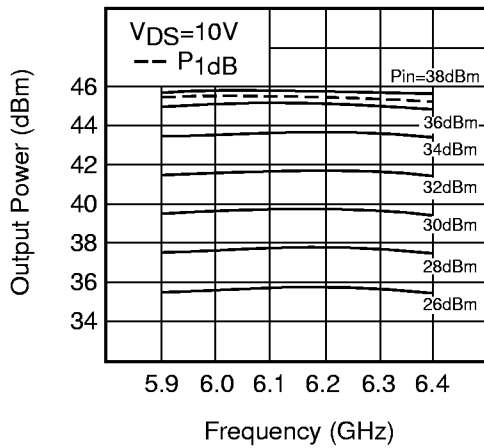
POWER DERATING CURVE



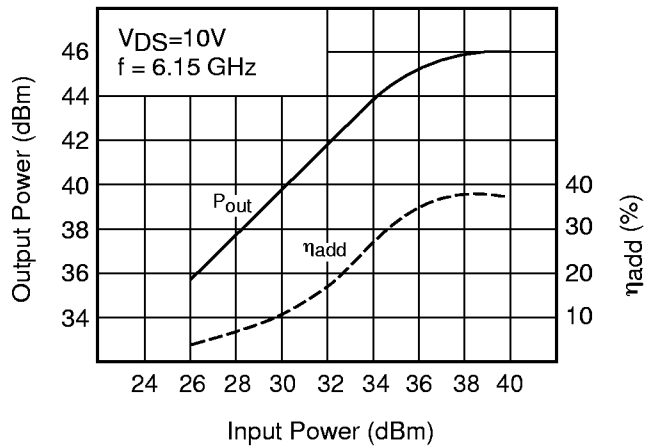
OUTPUT POWER & IM₃ vs. INPUT POWER



OUTPUT POWER vs. FREQUENCY

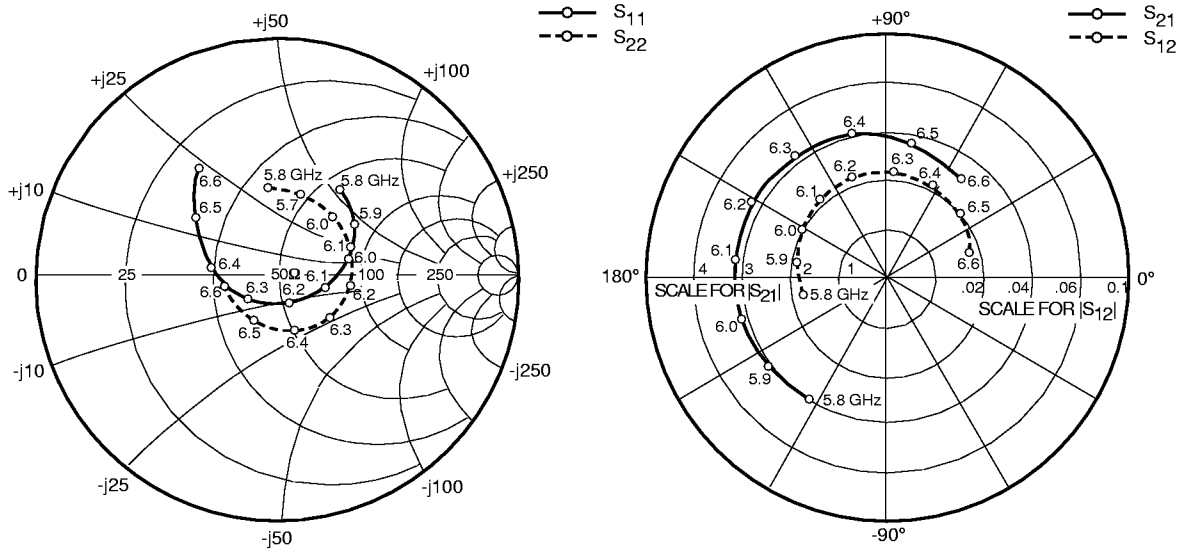


OUTPUT POWER vs. INPUT POWER



FLM5964-35DA

Internally Matched Power GaAs FETs

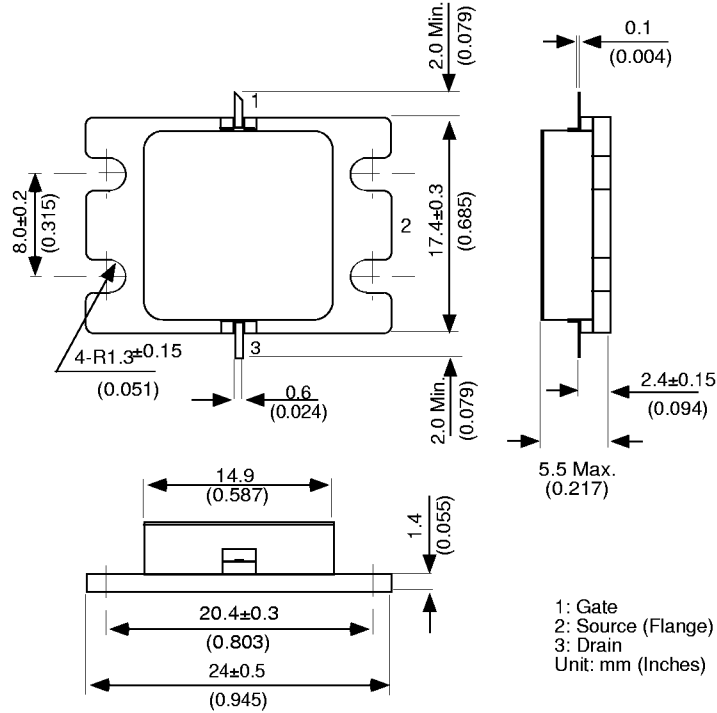


S-PARAMETERS

$V_{DS} = 10V, I_{DS} = 8000mA$

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5800	0.449	55.9	3.016	-124.1	0.073	-168.8	0.386	97.6
5900	0.384	36.2	3.113	-143.9	0.078	172.9	0.362	74.9
6000	0.298	14.6	3.188	-164.5	0.081	152.7	0.339	50.2
6100	0.204	-14.6	3.241	173.8	0.086	132.1	0.317	23.5
6200	0.114	-69.1	3.252	151.5	0.087	110.8	0.294	-5.1
6300	0.157	-148.5	3.202	128.3	0.087	88.0	0.260	-36.0
6400	0.290	170.3	3.066	103.8	0.083	64.6	0.223	-74.1
6500	0.438	145.8	2.825	78.9	0.079	40.3	0.199	-124.0
6600	0.569	125.6	2.487	54.1	0.070	16.1	0.232	-178.5

Case Style "IK"
 Metal-Ceramic Hermetic Package



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