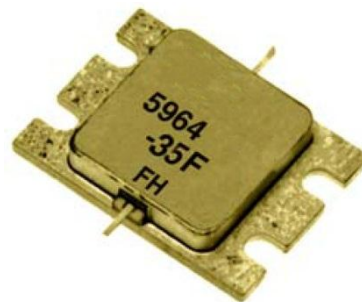


FEATURES

- High Output Power: $P_{1dB}=45.5\text{dBm(Typ.)}$
- High Gain: $G_{1dB}=9.0\text{dB(Typ.)}$
- High PAE: $\eta_{add}=36\%\text{(Typ.)}$
- Broad Band: 5.9 to 6.4GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\text{ohm}$
- Hermetically Sealed Package



DESCRIPTION

The FLM5964-35F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50ohm system.

ABSOLUTE MAXIMUM RATINGS (Case Temperature $T_c=25\text{deg.C}$)

Item	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	15	V
Gate-Source Voltage	V_{GS}	-5	V
Total Power Dissipation	P_T	115	W
Storage Temperature	T_{stg}	-65 to +175	deg.C
Channel Temperature	T_{ch}	175	deg.C

RECOMMENDED OPERATING CONDITION (Case Temperature $T_c=25\text{deg.C}$)

Item	Symbol	Condition	Limit	Unit
DC Input Voltage	V_{DS}		≤ 10	V
Forward Gate Current	I_{GF}	$R_G=10\text{ohm}$	≤ 108	mA
Reverse Gate Current	I_{GR}	$R_G=10\text{ohm}$	≥ -23.2	mA

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

Item	Symbol	Condition	Limit			Unit
			Min.	Typ.	Max.	
Drain Current	I_{DSS}	$V_{DS}=5V, V_{GS}=0V$	-	16	-	A
Transconductance	g_m	$V_{DS}=5V, I_{DS}=8.0A$	-	16	-	S
Pinch-off Voltage	V_p	$V_{DS}=5V, I_{DS}=960\text{mA}$	-0.5	-1.5	-3.0	V
Gate-Source Breakdown Voltage	V_{GSO}	$I_{GS}=-960\text{uA}$	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS}=10V$	45.0	45.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}	$f= 5.9 \text{ to } 6.4 \text{ GHz}$	8.0	9.0	-	dB
Drain Current	I_{dsr}	$I_{DS}(\text{DC})=8.0A \text{ (typ.)}$	-	8.5	9.5	A
Power-Added Efficiency	η_{add}		-	36	-	%
Gain Flatness	ΔG	$Z_s=Z_L=50 \text{ ohm}$	-	-	1.2	dB
3rd Order Intermodulation Distortion	IM_3	$f=6.4 \text{ GHz}$ $\Delta f=10\text{MHz, 2-tone Test}$ $P_{out}=35.0\text{dBm(S.C.L.)}$	-38	-40	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	1.1	1.3	deg.C/W
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{DS}(\text{DC}) \times R_{th}$	-	-	100	deg.C

G.C.P.: Gain Compression Point

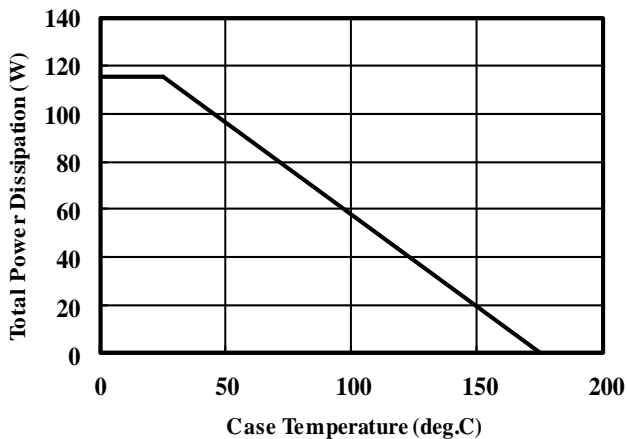
CASE STYLE	IK
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ESD	Class 3A	4000V to 8000V
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Note : Based on JEDEC JESD22-A114 (C=100pF, R=1.5kohm)

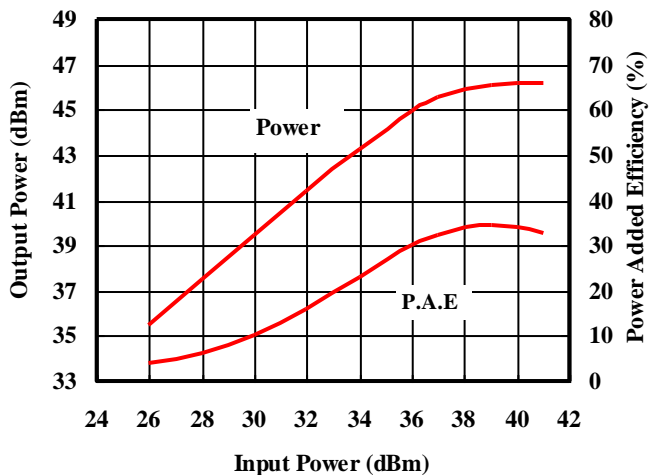
RoHS Compliance	Yes
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Power Derating Curve



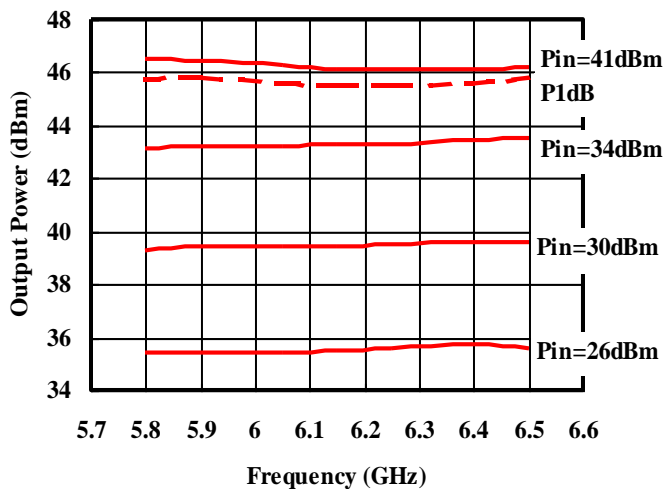
Output Power & P.A.E. vs. Input Power

VDS=10V, IDS(DC)=8A, F=6.15GHz



Output Power vs. Frequency

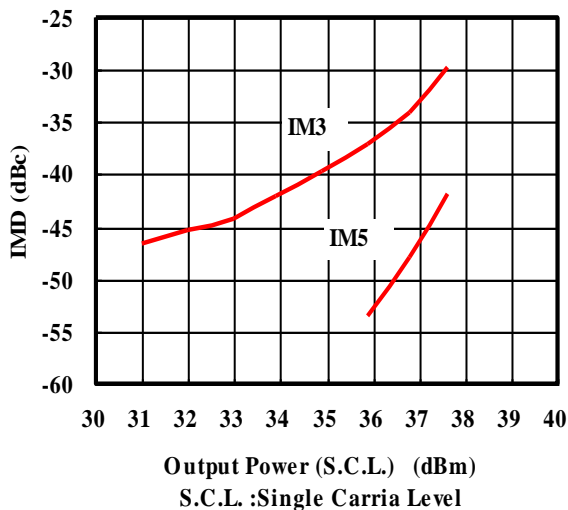
VDS=10V, IDS(DC)=8A



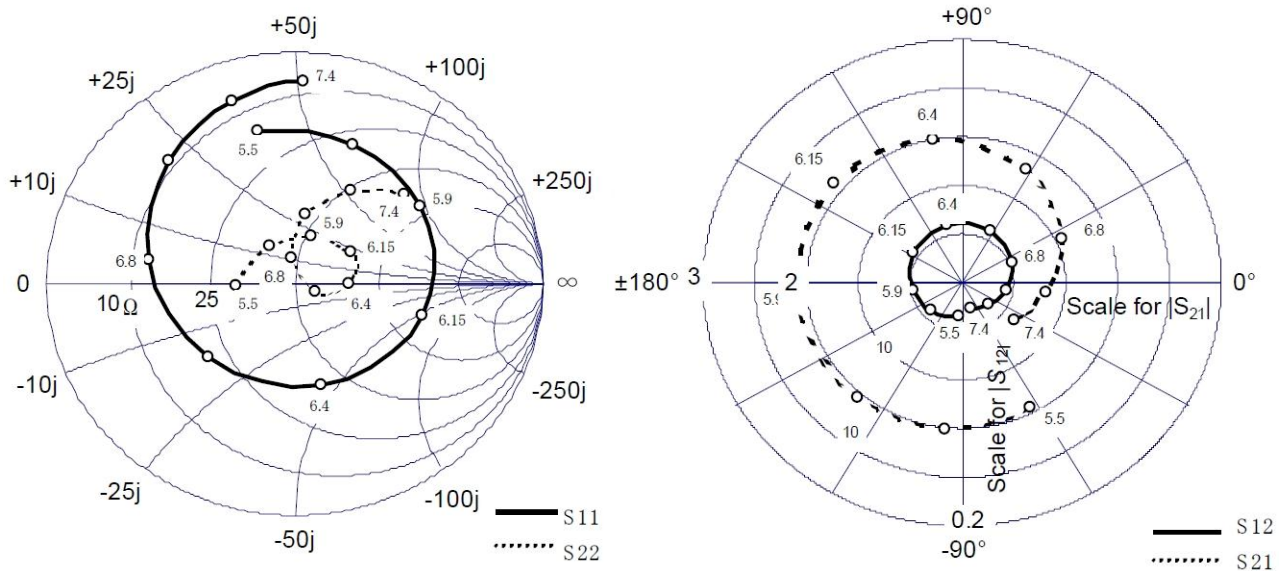
IMD vs. Output Power

VDS=10V, IDS(DC)=8A

f1=6.40GHz, f2=6.41GHz



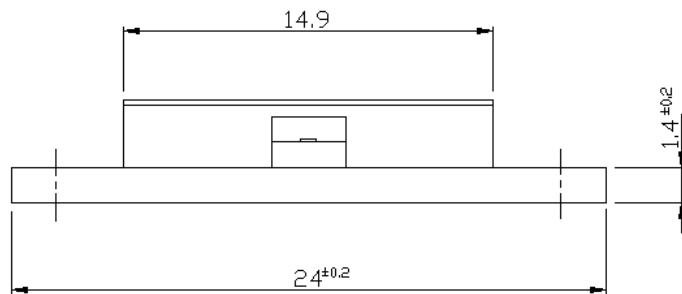
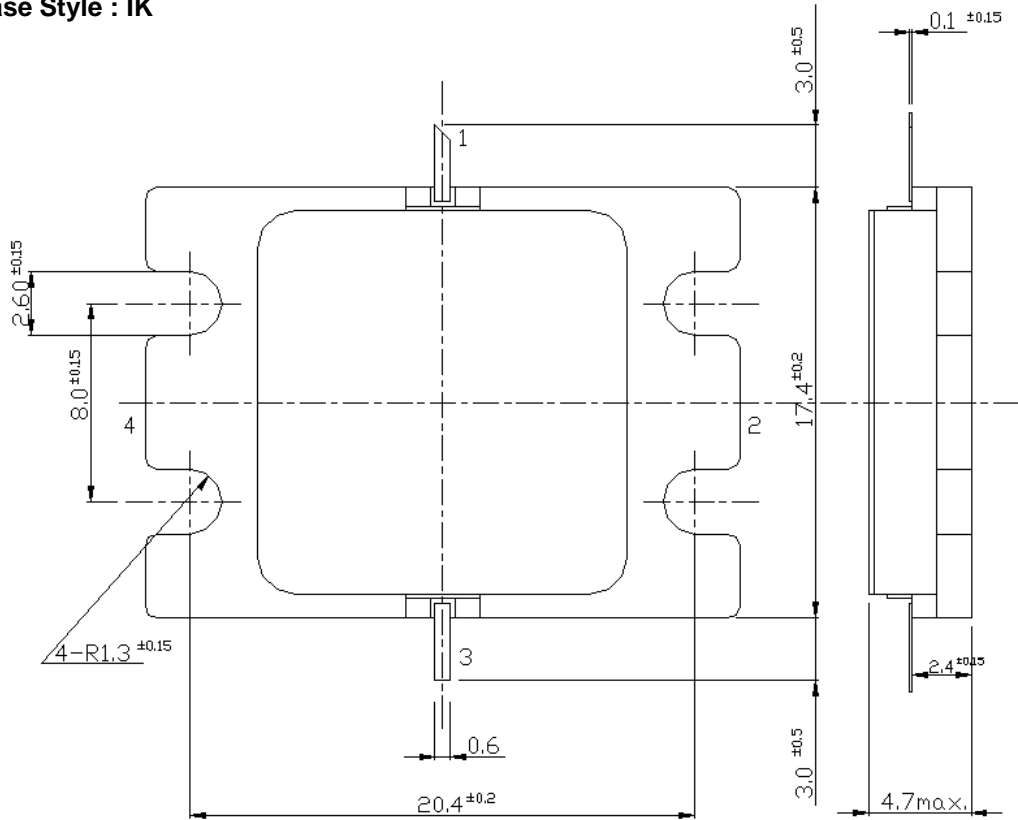
S-PARAMETER



VDS=10.0V , IDS(DC)=8.0A

Freq. [GHz]	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5.50	0.67	102.87	2.88	-62.72	0.04	-95.54	0.24	-177.89
5.60	0.66	85.51	2.95	-79.17	0.05	-114.71	0.20	153.50
5.70	0.65	68.42	3.02	-96.11	0.05	-134.53	0.19	122.57
5.80	0.63	50.90	3.06	-113.27	0.05	-153.13	0.20	95.12
5.90	0.61	33.18	3.11	-130.34	0.06	-169.44	0.22	72.18
6.00	0.58	14.84	3.14	-147.42	0.06	172.50	0.24	52.33
6.10	0.55	-4.44	3.18	-165.14	0.06	155.67	0.26	37.03
6.20	0.52	-25.22	3.20	177.48	0.07	138.90	0.26	24.21
6.30	0.47	-49.01	3.20	159.01	0.07	120.83	0.25	12.17
6.40	0.45	-76.47	3.19	140.15	0.07	103.25	0.22	-0.99
6.50	0.44	-106.87	3.12	120.73	0.07	83.21	0.16	-13.32
6.60	0.47	-137.61	3.00	100.85	0.07	62.73	0.09	-19.73
6.70	0.52	-166.01	2.82	81.21	0.07	42.98	0.03	45.23
6.80	0.59	170.37	2.62	62.01	0.06	23.63	0.11	95.85
6.90	0.67	150.03	2.36	43.29	0.06	6.16	0.21	91.96
7.00	0.73	133.37	2.13	24.82	0.05	-11.73	0.30	81.85
7.10	0.79	119.68	1.89	8.66	0.05	-26.89	0.38	71.10
7.20	0.83	107.43	1.66	-7.74	0.04	-41.76	0.46	60.22
7.30	0.86	97.28	1.45	-22.74	0.04	-60.07	0.53	50.29
7.40	0.87	87.88	1.26	-36.91	0.03	-69.68	0.59	41.32

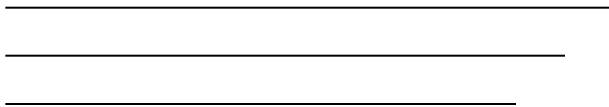
■ Package Outline
Case Style : IK



Pin Assignment

- 1 : Gate
- 2 : Source
- 3 : Drain
- 4 : Source

Unit : mm



FLM5964-35F

C-Band Internally Matched FET

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.