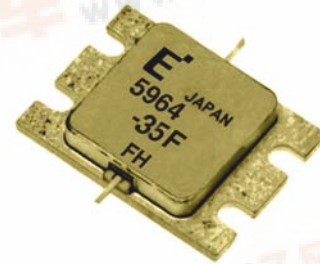


FLM5964-35F

C-Band Internally Matched FET

FEATURES

- High Output Power: P1dB=45.5dBm(Typ.)
- High Gain: G1dB=9.0dB(Typ.)
- High PAE: $\eta_{add}=36\%$ (Typ.)
- Broad Band: 5.9~6.4GHz
- Impedance Matched Zin/Zout = 50Ω
- 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 50Ω system.

ABSOLUTE MAXIMUM RATINGS (Case Temperature Tc=25°C)

Item	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	15	V
Gate-Source Voltage	V _{GS}	-5	V
Total Power Dissipation	P _r	115	W
Storage Temperature	T _{stg}	-65 to +175	°C
Channel Temperature	T _{ch}	175	°C

RECOMMENDED OPERATING CONDITION(Case Temperature Tc=25°C)

Item	Symbol	Condition	Limit	Unit
DC Input Voltage	V _{DS}		≤10	V
Forward Gate Current	I _{GF}	RG=10Ω	≤108	mA
Reverse Gate Current	I _{GR}	RG=10Ω	≥-23.2	mA

ELECTRICAL CHARACTERISTICS (Case Temperature Tc=25°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} =480mA	-0.5	-1.5	-3.0	V
Gate-Source Breakdown Voltage	V _{GSO}	I _{GS} =-480uA	-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 - 6.4 GHz	8.0	9.0	-	dB
Drain Current	I _{DSr}	I _{DS} (DC)=8.0A(typ.)	-	8.5	9.5	A
Power-added Efficiency	η_{add}	Z _s =Z _L =50 ohm	-	36	-	%
Gain Flatness	ΔG		-	-	1.2	dB
3rd Order Intermodulation Distortion	IM ₃	f=6.4 GHz Δf=10MHz, 2-tone Test P _{out} =35.0dBm(S.C.L.)	-38	-40	-	dBc
Thermal Resistance	R _{th}	Channel to Case	-	1.1	1.3	°C/W
Channel Temperature Rise	ΔT _{ch}	10V x I _{DS} (DC) X R _{th}	-	-	100	°C

CASE STYLE : IK

G.C.P.:Gain Compression Point

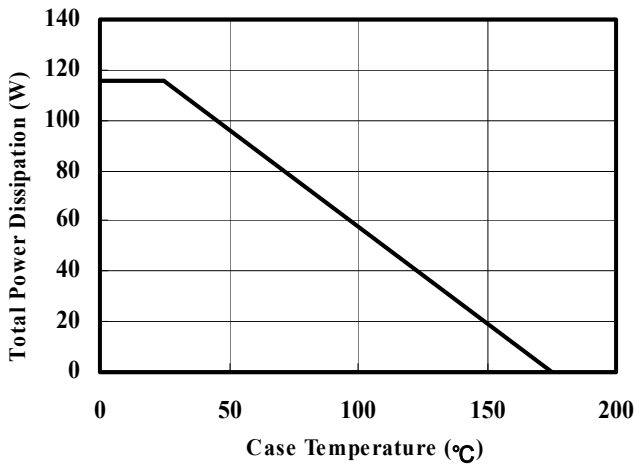
ESD	Class III	2000V ~
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Note : Based on EIAJ ED-4701 C-111A(C=100pF, R=1.5kΩ)

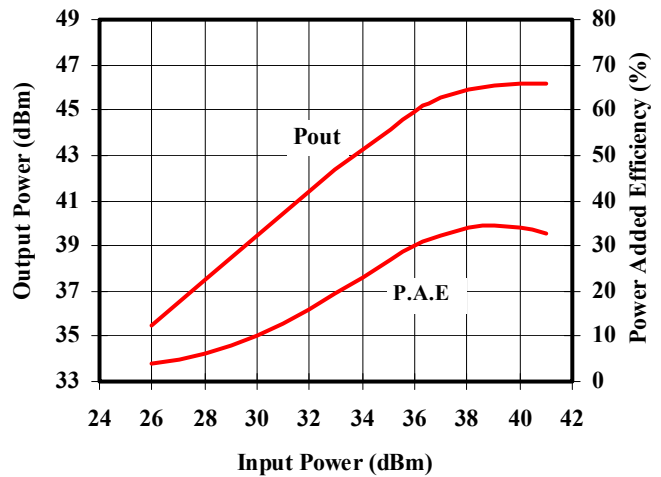
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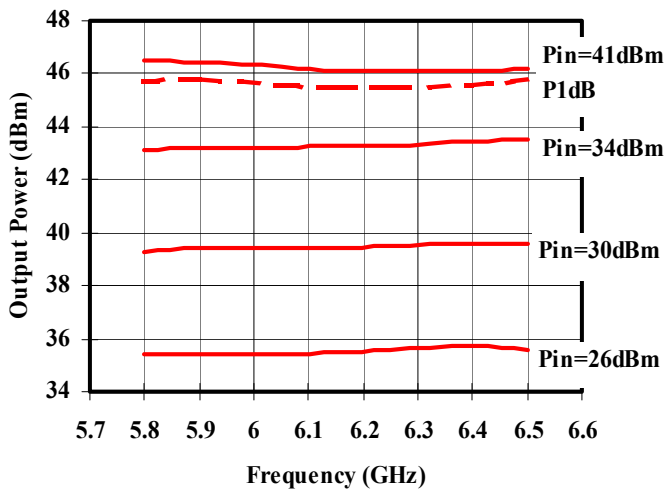
Power Derating Curve



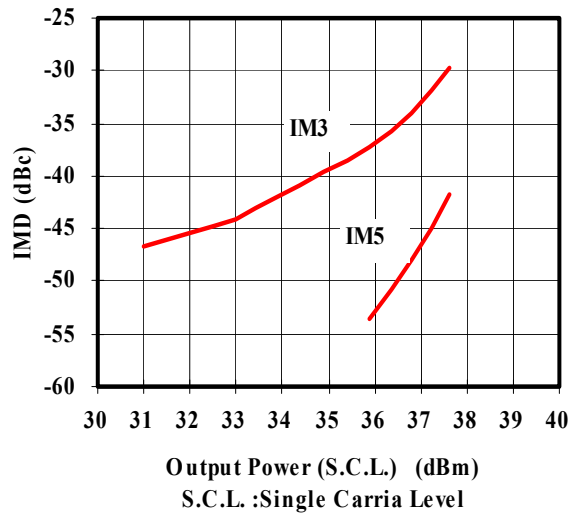
Output Power & P.A.E. vs. Input Power
VDS=10V, IDS(DC), F=6.15GHz



Output Power vs. Frequency
VDS=10V, IDS(DC)=8A



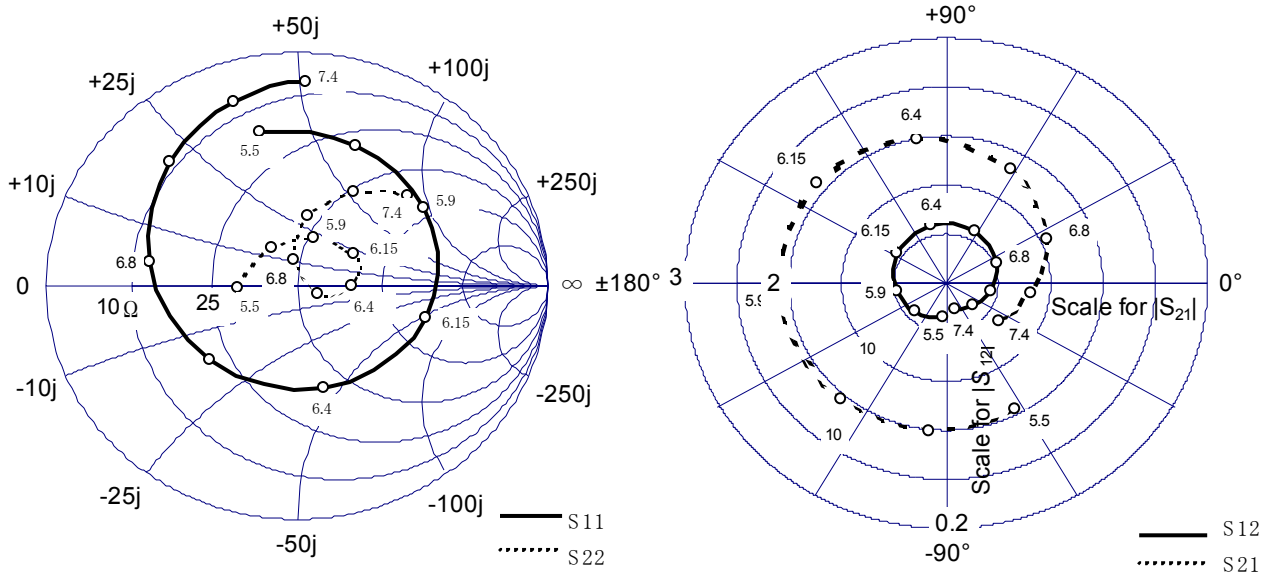
IMD vs. Output Power
VDS=10V, IDS(DC)=8A
f1=6.40GHz, f2=6.41GHz



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C-Band Internally Matched FET

S-PARAMETER



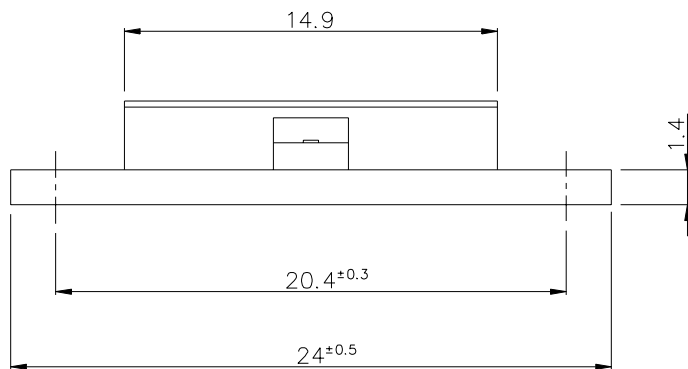
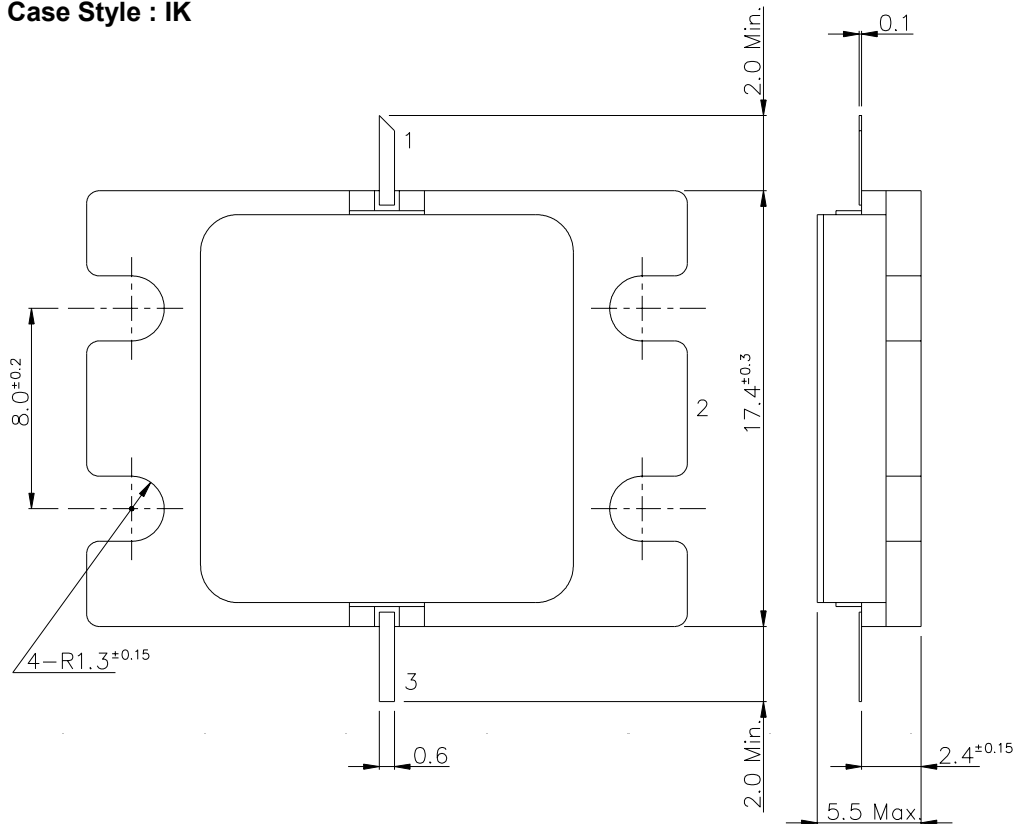
VDS=10V, IDS(DC)=8.0A

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

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C-Band Internally Matched FET

■ Package Out Line
Case Style : IK



PIN ASSIGMENT
 1 : GATE
 2 : SOURCE
 3 : DRAIN
 4 : SOURCE

Unit : mm

FLM5964-35F

C-Band Internally Matched FET

For further information please contact :

Eudyna Devices USA Inc.
2355 Zanker Rd.
San Jose, CA 95131-1138, U.S.A.
TEL: (408) 232-9500
FAX: (408) 428-9111
www.us.eudyna.com

Eudyna Devices Europe Ltd.
Network House
Norreys Drive
Maidenhead, Berkshire SL6 4FJ
United Kingdom
TEL: +44 (0) 1628 504800
FAX: +44 (0) 1628 504888

Eudyna Devices Asia Pte. Ltd.
Hong Kong Branch
Rm.1101,Ocean Centre, 5 Canton Road
Tsim Sha Tsui, Kowloon, Hong Kong
TEL: +852-2377-0227
FAX: +852-2377-3921

Eudyna Devices Inc.
Sales Division
1, Kanai-cho, Sakae-ku
Yokohama, 244-0845, Japan
TEL +81-45-853-8156
FAX +81-45-853-8170

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