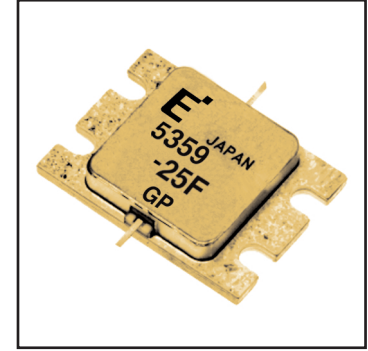


FEATURES

- High Output Power: $P_{1dB} = 44.5dBm$ (Typ.)
- High Gain: $G_{1dB} = 8.5dB$ (Typ.)
- High PAE: $\eta_{add} = 39%$ (Typ.)
- Low $IM_3 = -46dBc@P_o = 33.5dBm$
- Broad Band: 5.3 ~ 5.9GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$



DESCRIPTION

The FLM5359-25F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system.

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

ABSOLUTE MAXIMUM RATING (Ambient Temperature $T_a=25^\circ C$)

Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}		15	V
Gate-Source Voltage	V_{GS}		-5	V
Total Power Dissipation	P_T	$T_C = 25^\circ C$	93.7	W
Storage Temperature	T_{stg}		-65 to +175	$^\circ C$
Channel Temperature	T_{ch}		175	$^\circ C$

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

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

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS} = 5V, V_{GS} = 0V$	-	11.6	17.4	A
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}	$I_{GS} = -600\mu A$	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS} = 10V,$ $I_{DS} = 0.55 I_{DSS}$ (Typ.), $f = 5.3 \sim 5.9$ GHz, $Z_S = Z_L = 50$ ohm	43.5	44.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		7.5	8.5	-	dB
Drain Current	I_{dsr}		-	6200	7600	mA
Power-added Efficiency	η_{add}		-	39	-	%
Gain Flatness	ΔG		-	-	± 0.6	dB
3rd Order Intermodulation Distortion	IM_3	$f = 5.9$ GHz, $\Delta f = 10$ MHz 2-Tone Test $P_{out} = 33.5dBm$ S.C.L.	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	1.4	1.6	$^\circ C/W$
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{dsr} \times R_{th}$	-	-	100	$^\circ C$

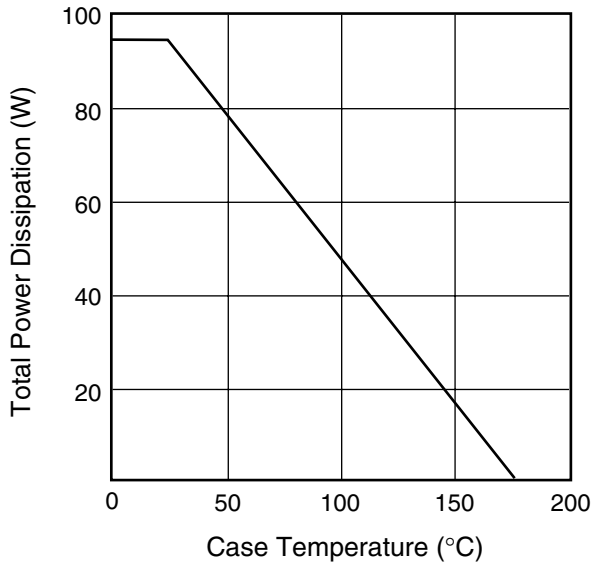
CASE STYLE: IK

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

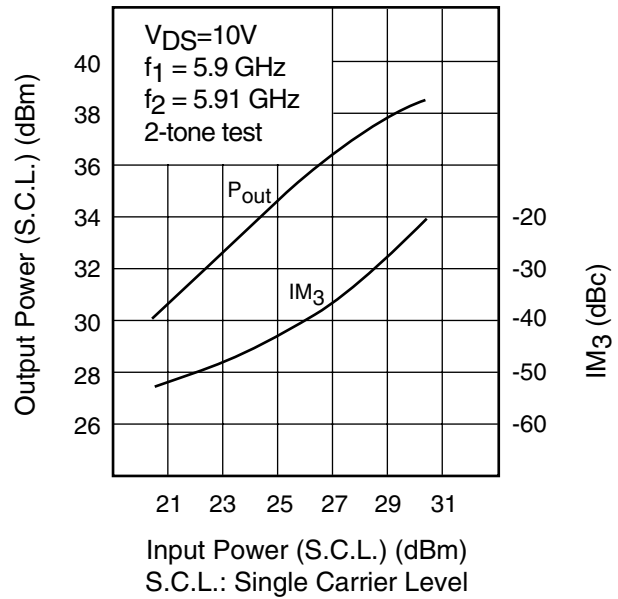
FLM5359-25F

C-Band Internally Matched FET

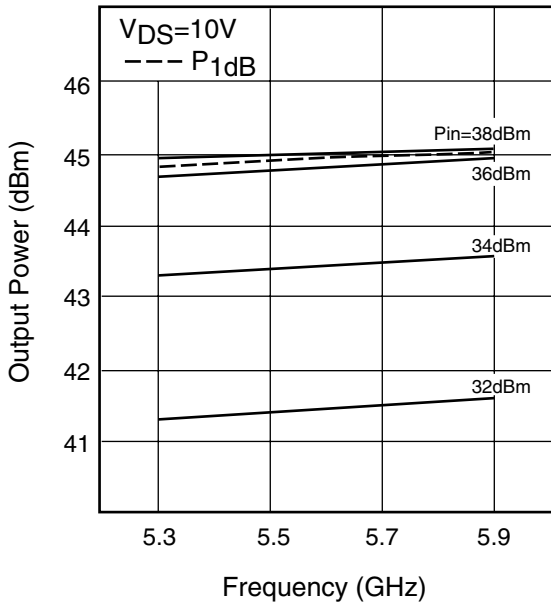
POWER DERATING CURVE



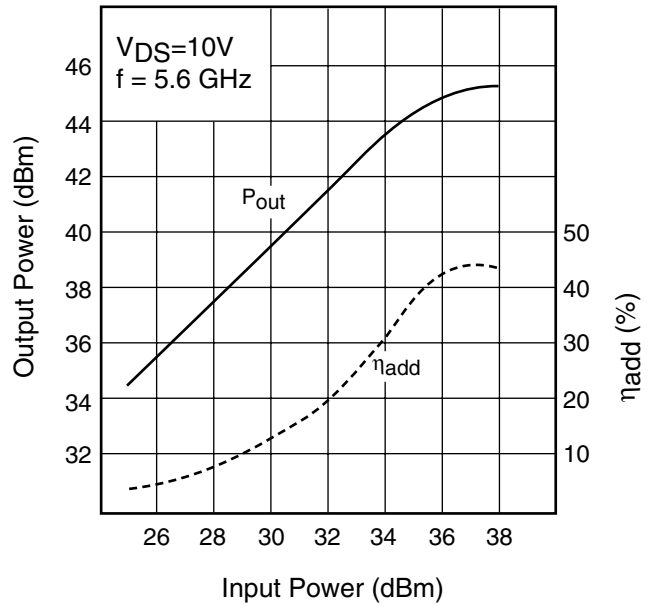
OUTPUT POWER & IM₃ vs. INPUT POWER

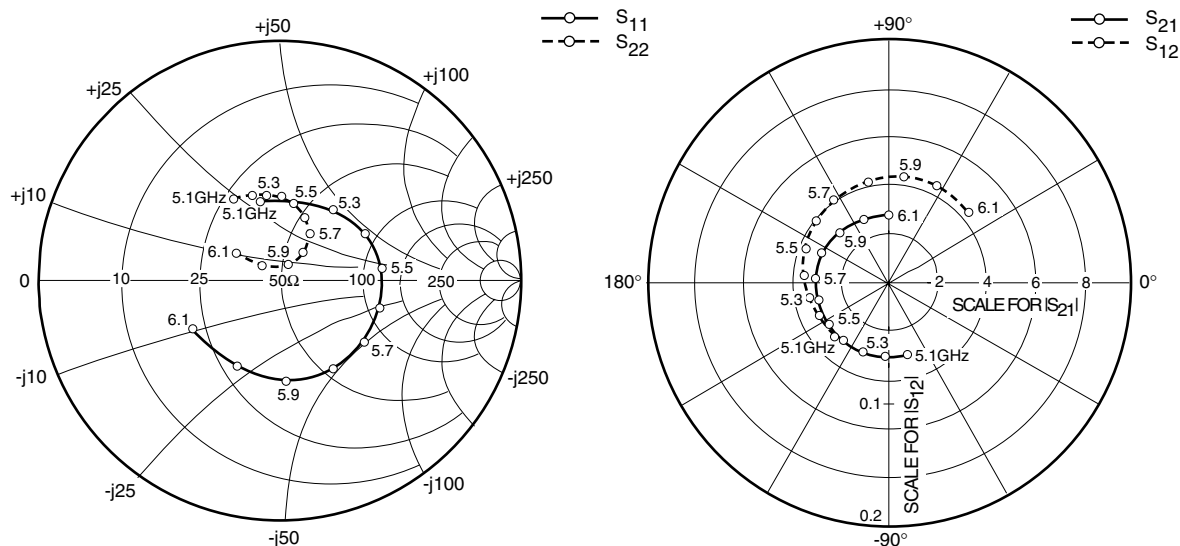


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER





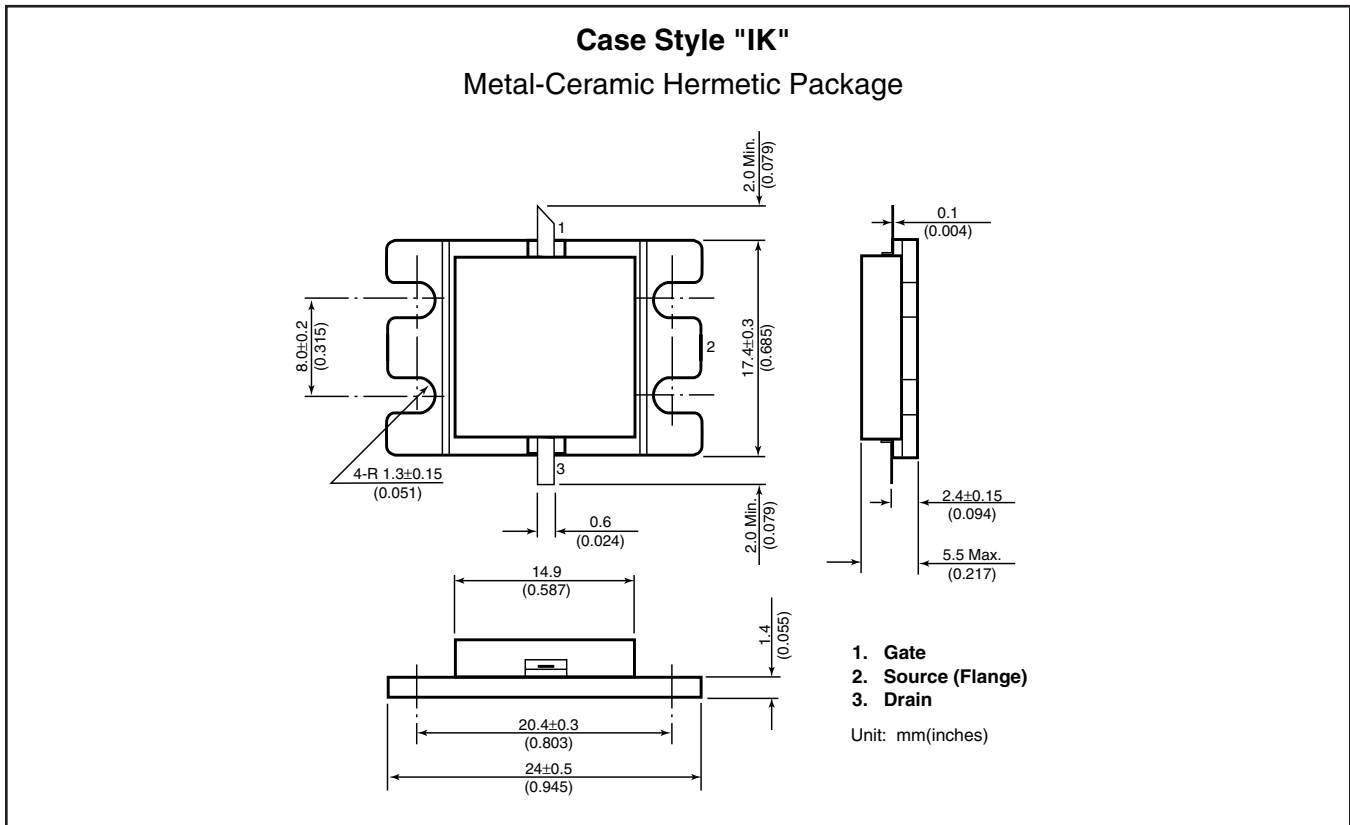
S-PARAMETERS

$V_{DS} = 10V, I_{DS} = 6800mA$

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5100	.342	104.6	3.045	-77.3	.063	-137.6	.392	119.8
5200	.349	78.6	3.013	-94.3	.064	-155.3	.366	108.1
5300	.370	52.9	3.043	-111.7	.068	-170.0	.354	99.2
5400	.393	28.8	3.045	-129.9	.070	174.1	.343	88.6
5500	.416	6.7	3.045	-147.8	.075	158.1	.321	78.2
5600	.432	-14.4	3.054	-166.3	.080	140.2	.281	67.6
5700	.436	-36.2	3.060	174.9	.083	122.1	.226	57.1
5800	.428	-59.4	3.061	155.4	.085	103.4	.152	50.8
5900	.417	-86.4	3.041	135.0	.088	83.3	.071	65.3
6000	.407	-117.2	2.964	113.5	.088	63.5	.091	141.9
6100	.418	-150.9	2.812	91.3	.086	40.5	.215	148.0

FLM5359-25F

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 Rd.
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

CAUTION

Eudyna Devices Inc. products contain **gallium arsenide (GaAs)** which can be hazardous to the human body and the environment. For safety, observe the following procedures:

- Do not put this product 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.

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