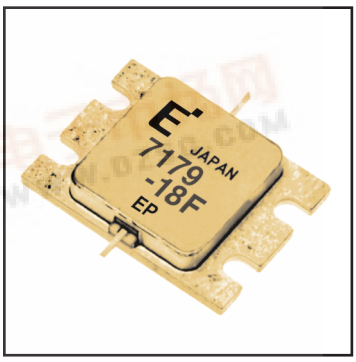
查询FLM7179-18F供应商 捷多邦，专业PCB打样工厂，24小时加急出货

FLM7179-18F

C-Band Internally Matched FET

FEATURES

- High Output Power: P_{1dB} = 42.5dBm (Typ.)
- High Gain: G_{1dB} = 8.0dB (Typ.)
- High PAE: η_{add} = 30% (Typ.)
- Low IM_3 = -46dBc@Po = 32.0dBm
- Broad Band: 7.1 ~ 7.9GHz
- Impedance Matched Zin/Zout = 50Ω
- Hermetically Sealed Package



DESCRIPTION

The FLM7179-18F 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 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	83.3	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 48.0 and -8.4 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	-	7.5	11.25	A
Transconductance	g_m	V_{DS} = 5V, I_{DS} = 4875mA	-	7.5	-	S
Pinch-off Voltage	V_p	V_{DS} = 5V, I_{DS} = 250mA	-0.5	-1.5	-3.0	V
Gate Source Breakdown Voltage	V_{GSO}	I_{GS} = -250μA	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	V_{DS} =10V, I_{DS} = 0.65 I_{DSS} (Typ.), f = 7.1 ~7.9 GHz, Z_S=Z_L= 50 ohm	42.0	42.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		7.0	8.0	-	dB
Drain Current	I_{dsr}		-	4875	6000	mA
Power-added Efficiency	η_{add}		-	30	-	%
Gain Flatness	ΔG		-	-	±0.6	dB
3rd Order Intermodulation Distortion	IM_3	f =7.9 GHz, Δf = 10 MHz 2-Tone Test P_{out} = 32.0dBm S.C.L.	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	1.6	1.8	°C/W
Channel Temperature Rise	ΔT_{ch}	10V x I_{dsr} x R_{th}	-	-	80	°C

CASE STYLE: IK

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

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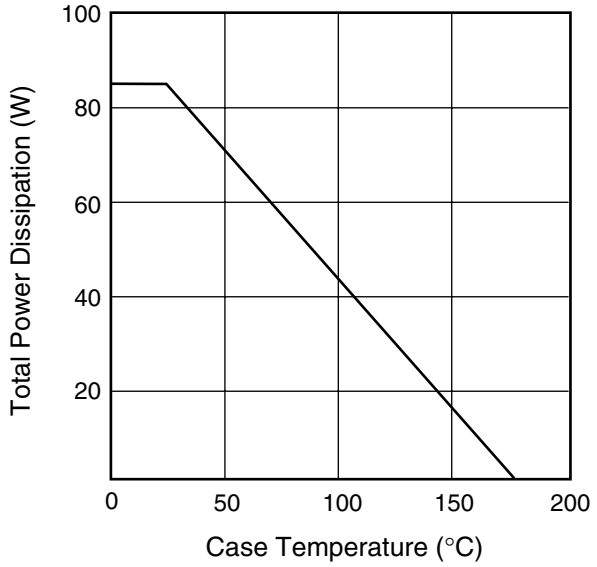
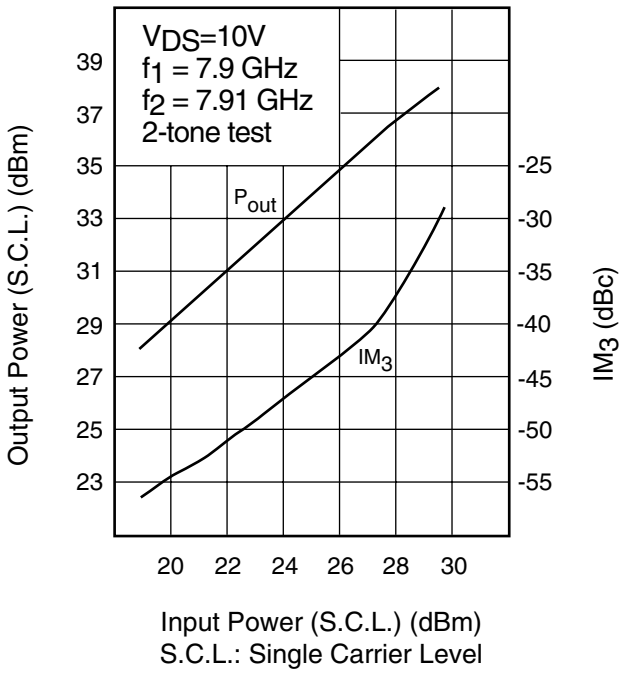
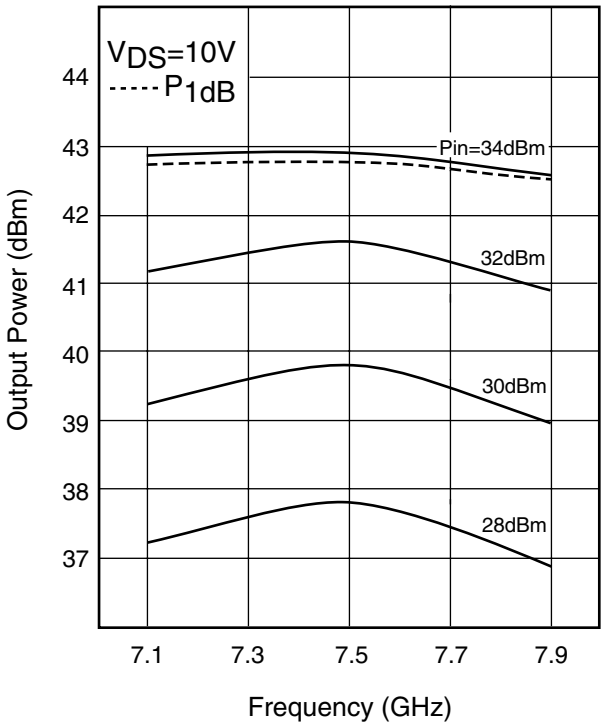
POWER DERATING CURVE



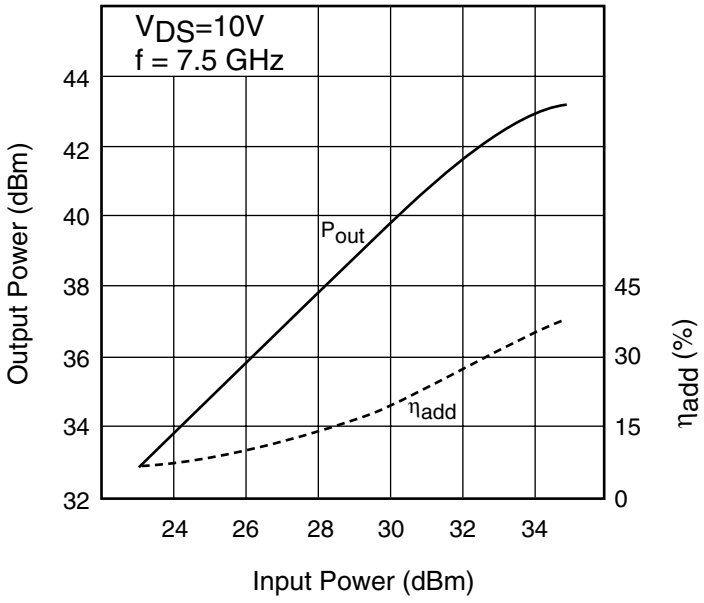
OUTPUT POWER & IM3 vs. INPUT POWER

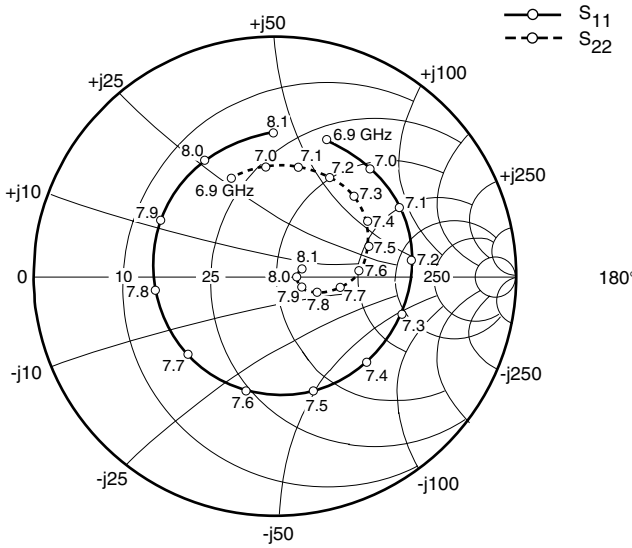


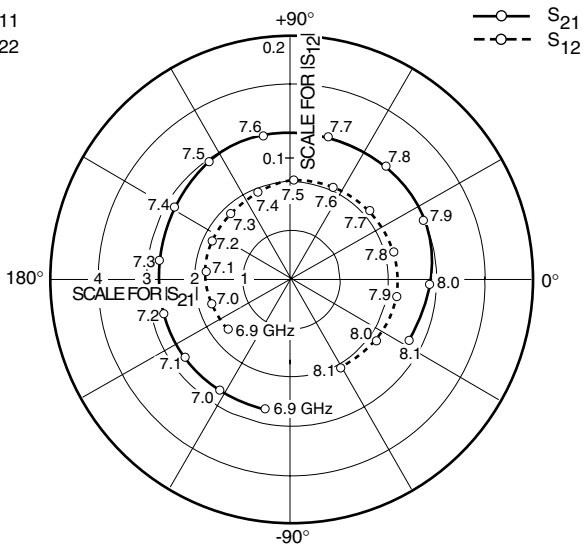
OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER







S-PARAMETERS

V_{DS} = 10V, I_{DS} = 4875mA

FREQUENCY	S11		S21		S12		S22	
(MHZ)	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
6900	.608	69.8	2.712	-101.5	.067	-142.1	.448	114.3
7000	.595	49.1	2.703	-123.1	.069	-162.8	.458	95.0
7100	.588	29.2	2.712	-143.6	.071	175.7	.465	77.6
7200	.567	6.8	2.744	-165.5	.072	154.6	.470	60.9
7300	.550	-16.7	2.799	172.2	.075	133.4	.465	45.7
7400	.526	-43.1	2.868	149.3	.077	111.5	.446	31.1
7500	.507	-71.6	2.943	125.5	.081	88.8	.410	17.4
7600	.493	-103.7	3.008	101.1	.083	66.0	.351	3.8
7700	.484	-137.3	3.037	75.7	.086	41.2	.273	-9.6
7800	.500	-172.8	3.030	49.8	.090	15.9	.189	-20.3
7900	.527	153.3	2.973	23.9	.088	-8.3	.118	-21.9
8000	.571	121.0	2.865	-2.1	.086	-34.7	.090	-1.4
8100	.605	90.9	2.722	-27.5	.083	-60.3	.117	13.2

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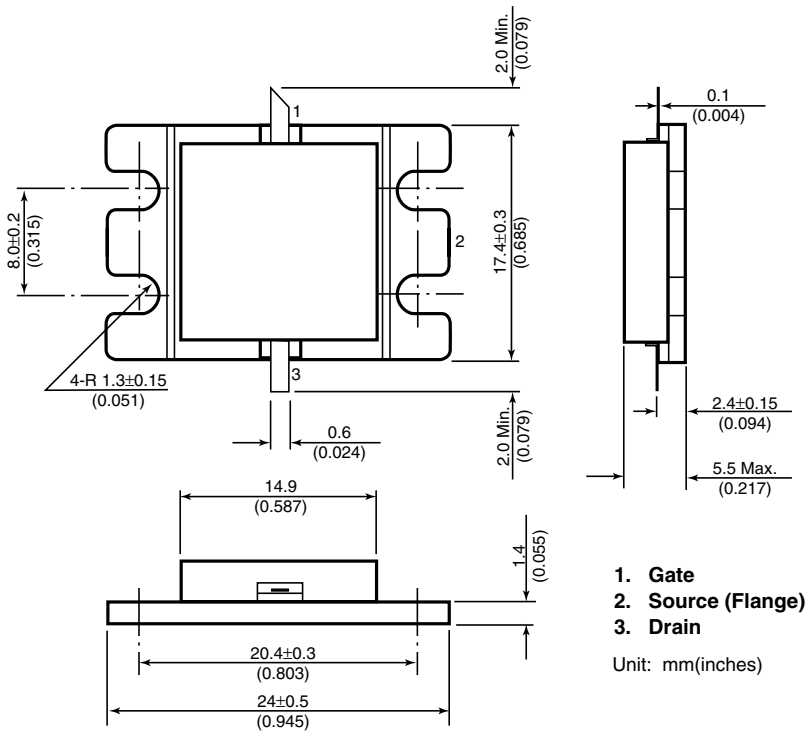
Case Style "IK"

Metal-Ceramic Hermetic Package



1. **Gate**
2. **Source (Flange)**
3. **Drain**

Unit: mm(inches)

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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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