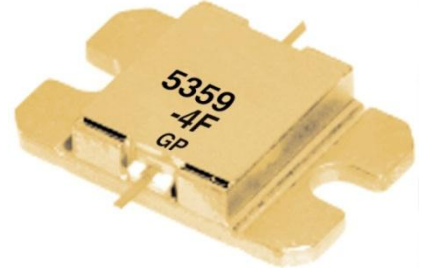


FEATURES

- High Output Power: $P_{1dB} = 36.5\text{dBm}$ (Typ.)
- High Gain: $G_{1dB} = 10.5\text{dB}$ (Typ.)
- High PAE: $\eta_{add} = 37\%$ (Typ.)
- Low IM3 = $-46\text{dBc}@P_o = 25.5\text{dBm}$
- Broad Band: 5.3 to 5.9GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\text{ohm}$
- Hermetically Sealed Package



DESCRIPTION

The FLM5359-4F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system.

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

ABSOLUTE MAXIMUM RATING (Ambient Temperature $T_a=25\text{deg.C}$)

Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}		15	V
Gate-Source Voltage	V_{GS}		-5	V
Total Power Dissipation	P_T	$T_c = 25\text{deg.C}$	25.0	W
Storage Temperature	T_{stg}		-65 to +175	deg.C
Channel Temperature	T_{ch}		175	deg.C

SEDI 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 16.0 and -2.2 mA respectively with gate resistance of 100ohm.

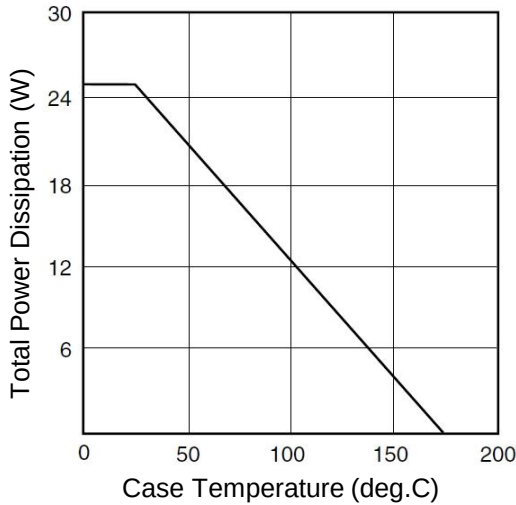
ELECTRICAL CHARACTERISTICS (Ambient Temperature $T_a=25\text{deg.C}$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS}=5V, V_{GS}=0V$	-	1950	2900	mA
Transconductance	g_m	$V_{DS}=5V, I_{DS}=1100\text{mA}$	-	1000	-	mS
Pinch-off Voltage	V_p	$V_{DS}=5V, I_{DS}=90\text{mA}$	-1.0	-2.0	-3.5	V
Gate Source Breakdown Voltage	V_{GSO}	$I_{GS}=-90\mu A$	-5.0	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS}=10V,$	35.5	36.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}	$I_{DS}=0.55 I_{DSS}$ (Typ.),	9.5	10.5	-	dB
Drain Current	I_{dsr}	$f=5.3$ to 5.9 GHz,	-	1100	1300	mA
Power-added Efficiency	η_{add}	$Z_S=Z_L=50\text{ohm}$	-	37	-	%
Gain Flatness	ΔG		-	-	+/-0.6	dB
3rd Order Intermodulation Distortion	IM_3	$f = 5.9$ GHz, $\Delta f = 10$ MHz 2-Tone Test $P_{out} = 25.5\text{dBm S.C.L.}$	-44	-46	-	dBc
Thermal Resistance	R_{th}	Channel to Case	-	5.0	6.0	deg.C/W
Channel Temperature Rise	ΔT_{ch}	$10V \times I_{dsr} \times R_{th}$	-	-	80	deg.C

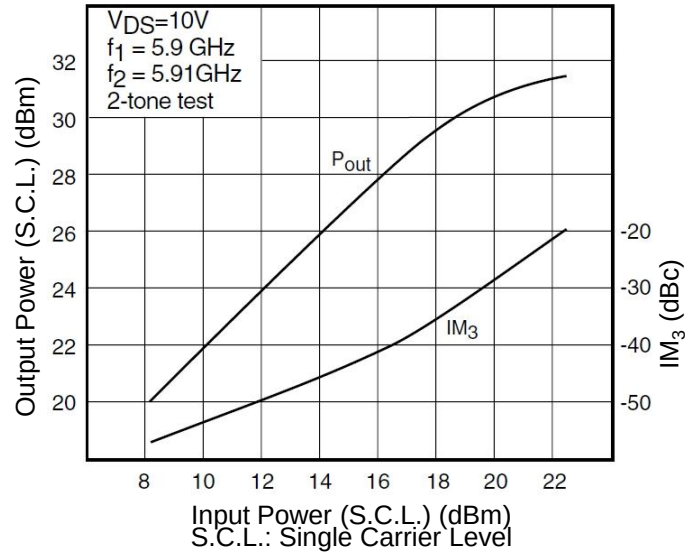
G.C.P.: Gain Compression Point, S.C.L.: Single Carrier Level

CASE STYLE	IB	
ESD	Class 3A	4000V to 8000V
Note : Based on EIAJ ED-4701 C-111A (C=100pF, R=1.5kohm)		
RoHS Compliance	Yes	

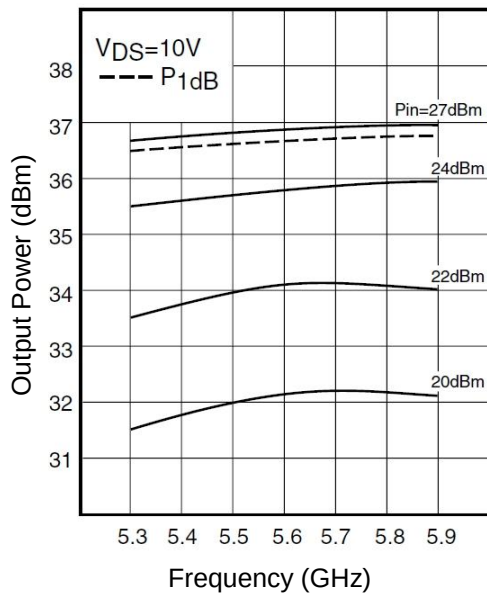
POWER DERATING CURVE



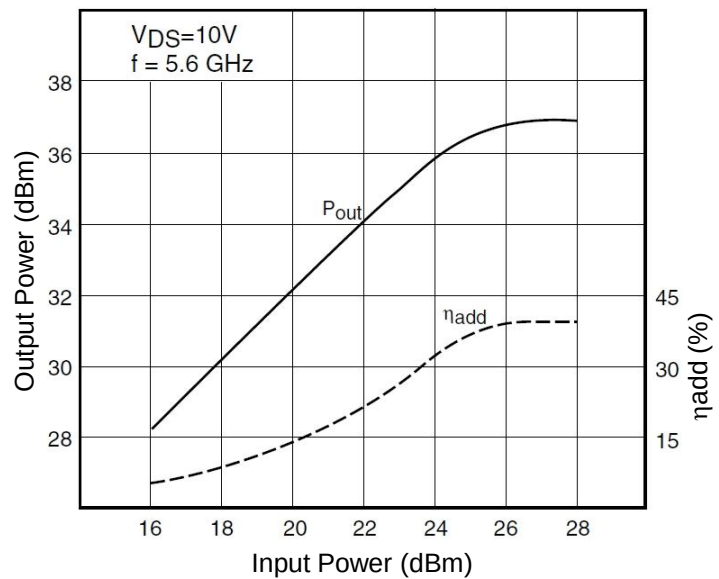
OUTPUT POWER & IM₃ vs. INPUT POWER

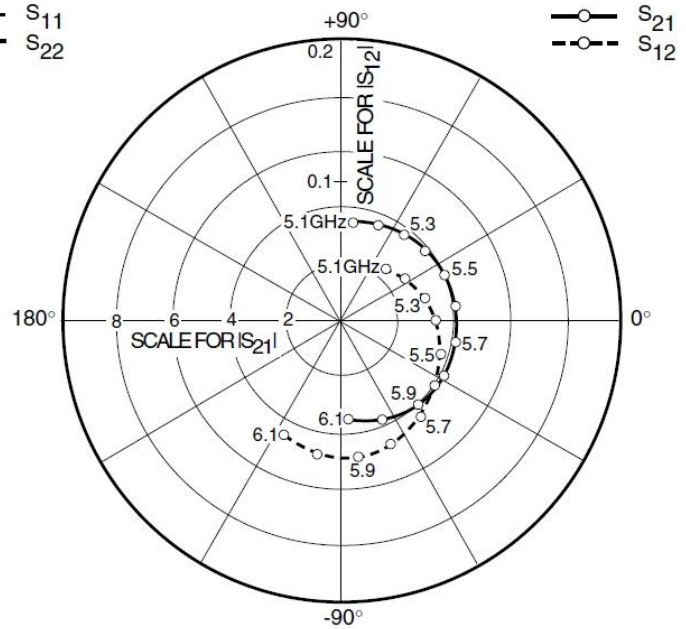
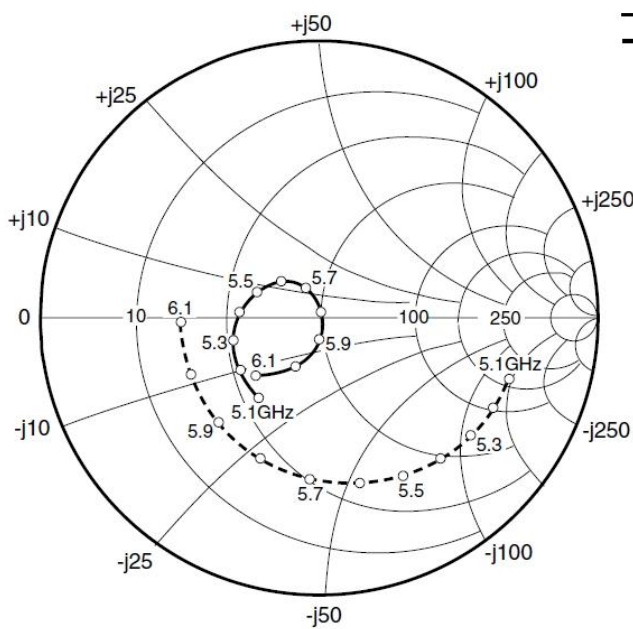


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER





S-PARAMETERS

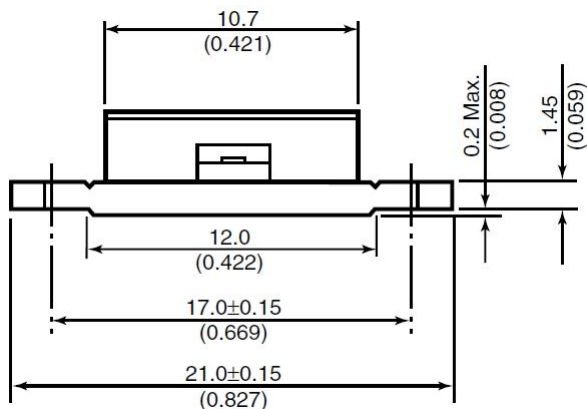
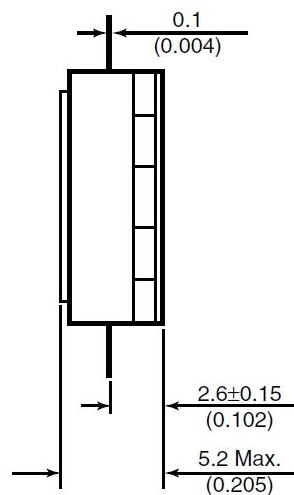
V_{DS} = 10V, I_{DS} = 1100mA

FREQUENCY (MHz)	S ₁₁		S ₂₁		S ₁₂		S ₂₂	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
5100	0.363	-126.5	3.558	83.3	0.048	48.4	0.708	-18.0
5200	0.341	-146.1	3.665	69.1	0.054	31.8	0.697	-27.6
5300	0.317	-165.4	3.769	54.5	0.062	14.5	0.680	-38.0
5400	0.287	175.9	3.887	39.5	0.068	-0.5	0.664	-49.3
5500	0.244	156.5	4.001	23.8	0.076	-17.8	0.642	-62.2
5600	0.189	136.3	4.092	7.2	0.083	-33.6	0.611	-76.7
5700	0.116	113.0	4.150	-10.5	0.089	-49.8	0.579	-93.9
5800	0.029	69.0	4.141	-29.0	0.093	-67.8	0.548	-113.2
5900	0.082	-88.4	4.025	-48.1	0.097	-83.5	0.524	-134.1
6000	0.195	-115.1	3.822	-67.5	0.096	-100.3	0.508	-156.3
6100	0.309	-137.5	3.523	-86.8	0.091	-117.0	0.502	-178.2

Technical drawing of a mechanical part, likely a connector or plug, showing dimensions and tolerances. The part is symmetrical with a central rectangular body and octagonal end caps. Key dimensions include:

- Overall width: 12.9 ± 0.2 (0.508)
- Overall height: 2.0 Min. (0.079)
- Central slot width: 0.6 (0.024)
- Specific feature dimension: $2-R\ 1.6 \pm 0.15$ (0.063)

Callouts 1, 2, and 3 point to specific features: 1 points to the top flange, 2 points to the top octagonal cap, and 3 points to the bottom flange.



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

Unit: mm(inches)

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.