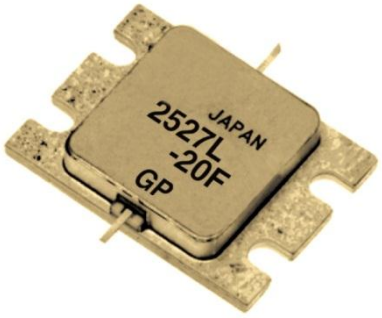
FLM2527L-20F

L-Band Internally Matched FET



FEATURES

- High Output Power: P_{1dB} = 43.0dBm (Typ.)
- High Gain: G_{1dB} = 11.0dB (Typ.)
- High PAE: η_{add} = 38% (Typ.)
- Broad Band: 2.5 to 2.7GHz
- Impedance Matched Zin/Zout = 50ohm
- Hermetically Sealed Package

DESCRIPTION

The FLM2527L-20F is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system. This product is uniquely suited for use in MMDS base station amplifiers applications.
SEDI's stringent Quality Assurance Program assures the highest reliability and consistent performance.

ABSOLUTE MAXIMUM RATING (Ambient Temperature Ta=25deg.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 = 25deg.C	83.3	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 26.0 and -11.6 mA respectively with gate resistance of 25ohm

ELECTRICAL CHARACTERISTICS (Ambient Temperature Ta=25deg.C)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	V_{DS}=5V, V_{GS}=0V	-	9.0	13.5	A
Transconductance	g_m	V_{DS}=5V, I_{DS}=4800mA	-	4000	-	mS
Pinch-off Voltage	V_p	V_{DS}=5V, I_{DS}=480mA	-1.0	-2.0	-3.5	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, I_{DS}=0.55 I_{DSS} (Typ.), f=2.5 to 2.7 GHz, Z_S=Z_L=50ohm	42.0	43.0	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		10.0	11.0	-	dB
Drain Current	I_{dsr}		-	4800	6000	mA
Power-added Efficiency	η_{add}		-	38	-	%
Gain Flatness	ΔG		-	-	+/-0.6	dB
Thermal Resistance	R_{th}	Channel to Case	-	1.6	1.8	deg.C/W
Channel Temperature Rise	ΔT_{ch}	10V x I_{dsr} x R_{th}	-	-	80	deg.C

G.C.P.: Gain Compression Point

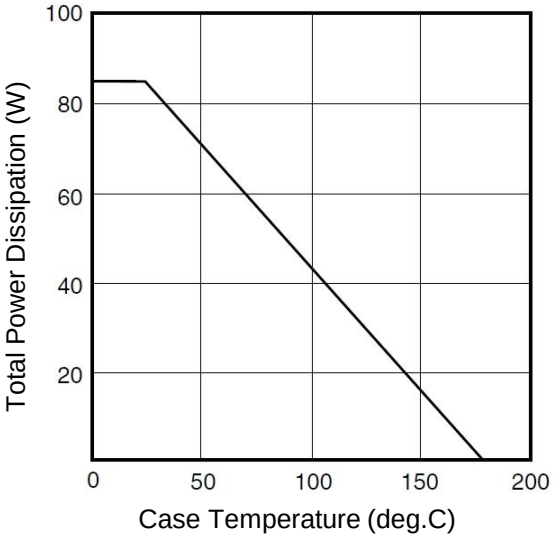
CASE STYLE	IK

ESD	Class 3A	4000V to 8000V

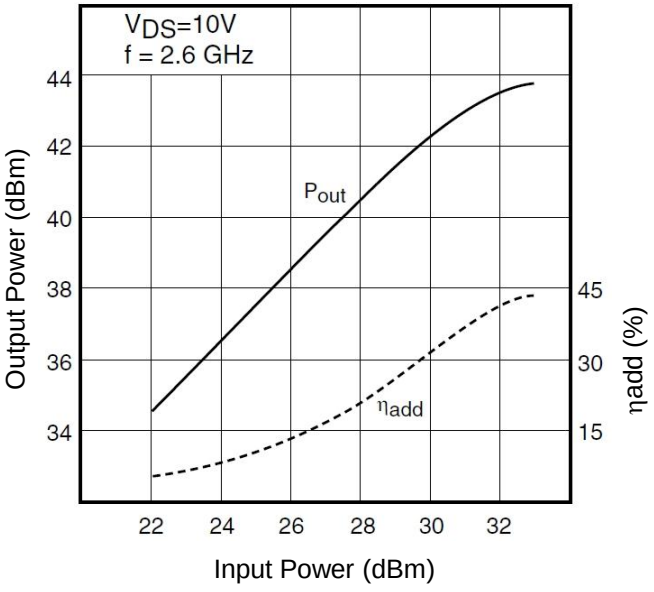
Note : Based on EIAJ ED-4701 C-111A (C=100pF, R=1.5kohm)

RoHS Compliance	Yes

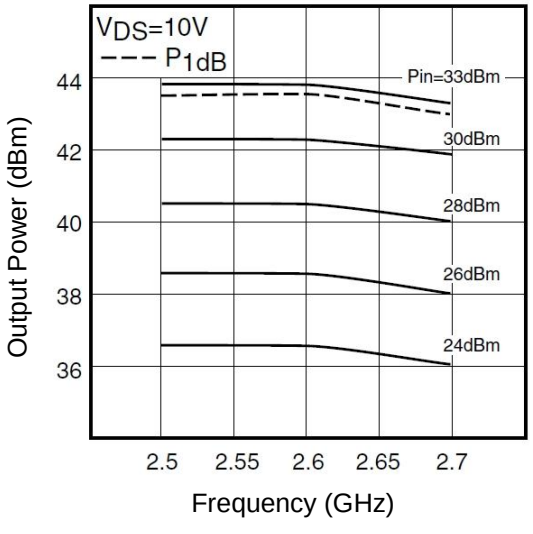
POWER DERATING CURVE

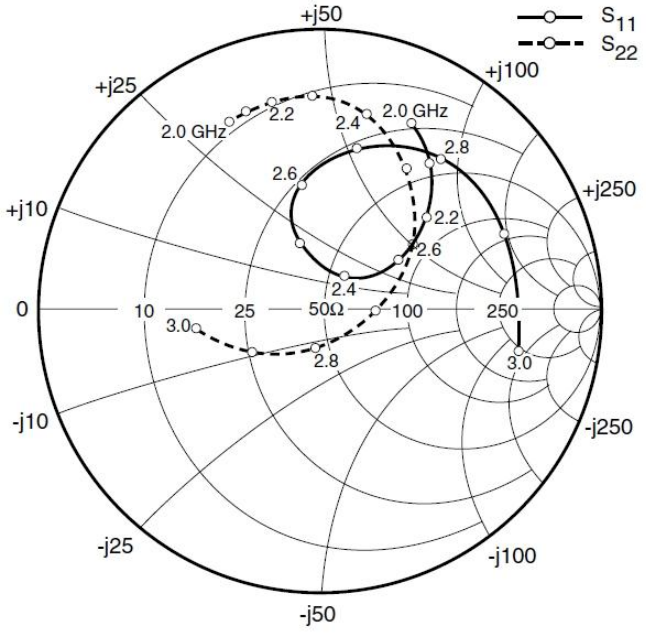


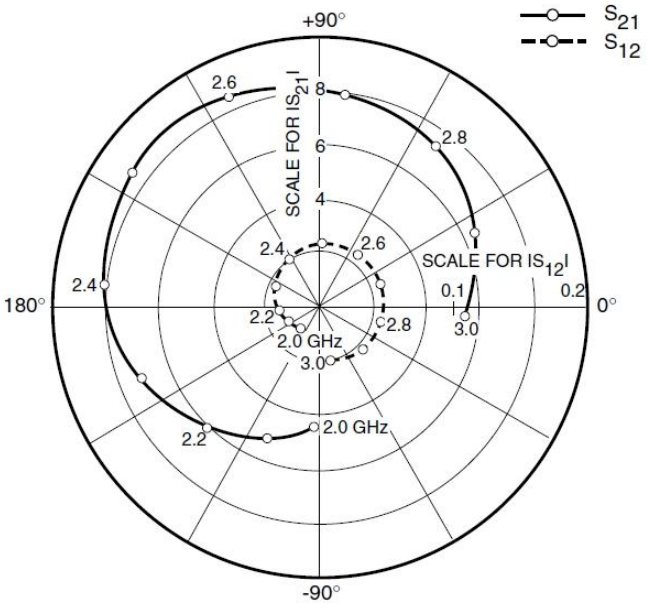
OUTPUT POWER vs. INPUT POWER



OUTPUT POWER vs. FREQUENCY





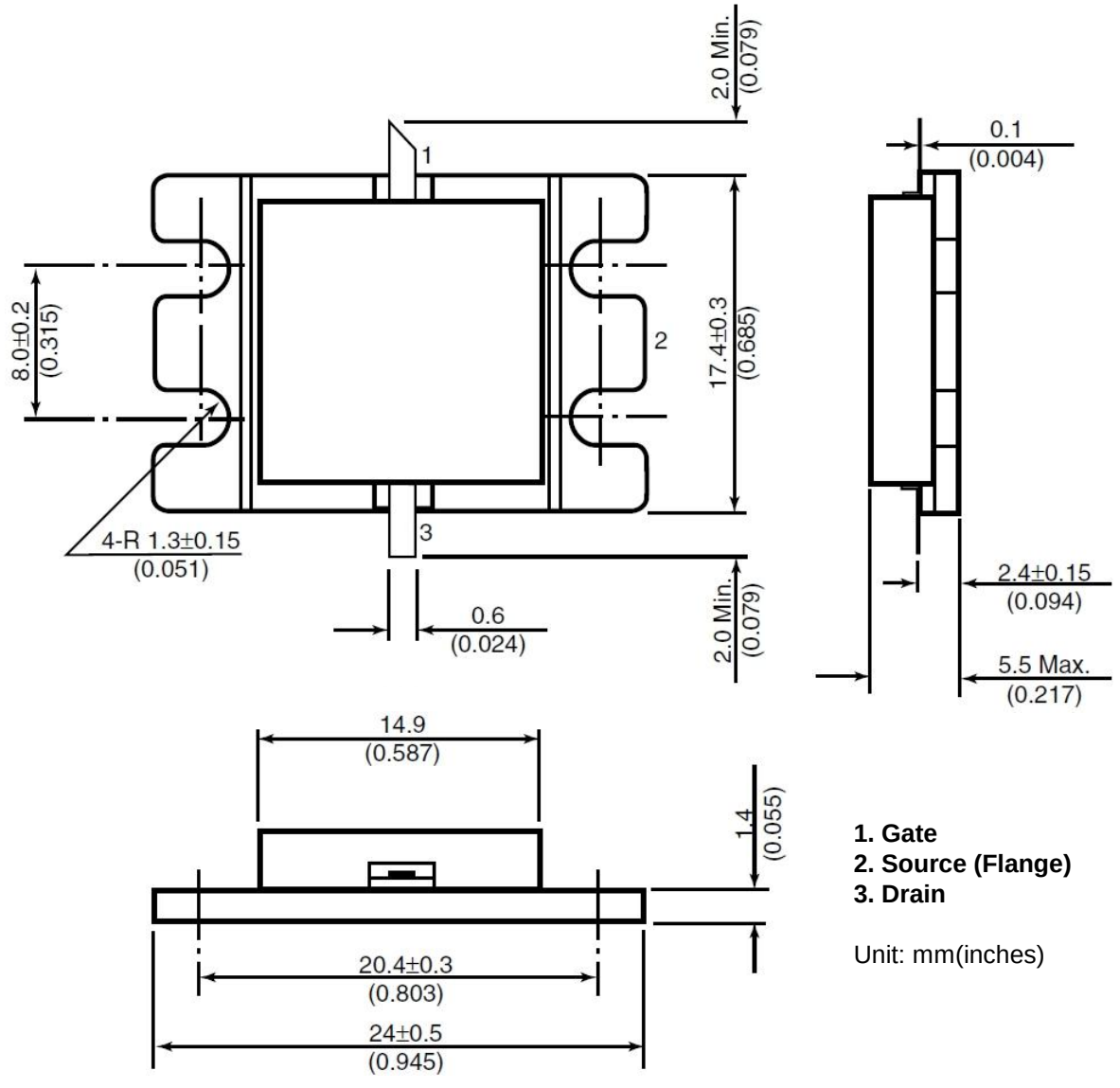


S-PARAMETERS

V_{DS} = 10V, I_{DS} = 4800mA

FREQUENCY	S11		S21		S12		S22	
(MHz)	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
2000	0.732	64.2	2.176	-93.6	0.022	-129.8	0.746	115.8
2100	0.641	52.9	2.582	-112.2	0.025	-153.8	0.756	110.7
2200	0.503	40.8	3.060	-133.5	0.030	-175.9	0.768	103.0
2300	0.323	32.4	3.584	-158.6	0.036	155.0	0.763	92.1
2400	0.151	55.5	4.026	173.6	0.041	122.8	0.711	76.9
2500	0.247	105.8	4.264	144.5	0.046	88.9	0.591	58.7
2600	0.444	98.0	4.245	113.6	0.047	53.1	0.404	35.3
2700	0.595	77.1	4.001	83.4	0.048	20.1	0.200	-0.9
2800	0.677	51.7	3.626	54.2	0.046	-14.1	0.134	-96.6
2900	0.707	22.6	3.189	25.6	0.046	-44.5	0.286	-149.4
3000	0.715	-11.5	2.725	-2.8	0.041	-76.9	0.441	-171.5

Case Style "IK"
Metal-Ceramic Hermetic Package



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.