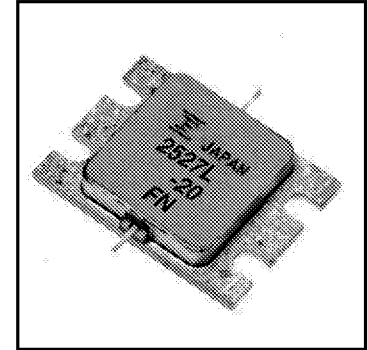


FEATURES

- High Output Power: $P_{1dB} = 42.5\text{dBm}$ (Typ.)
- High Gain: $G_{1dB} = 11\text{dB}$ (Typ.)
- High PAE: $\eta_{add} = 34\%$ (Typ.)
- Broad Band: 2.5 ~ 2.7GHz
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed Package



DESCRIPTION

The FLM2527L-20 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.

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

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

Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}		15	V
Gate-Source Voltage	V_{GS}		-5	V
Total Power Dissipation	P_T	$T_c = 25^\circ\text{C}$	83.3	W
Storage Temperature	T_{stg}		-65 to +175	$^\circ\text{C}$
Channel Temperature	T_{ch}		175	$^\circ\text{C}$

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 13 and -11.6 mA respectively with gate resistance of 25 Ω .

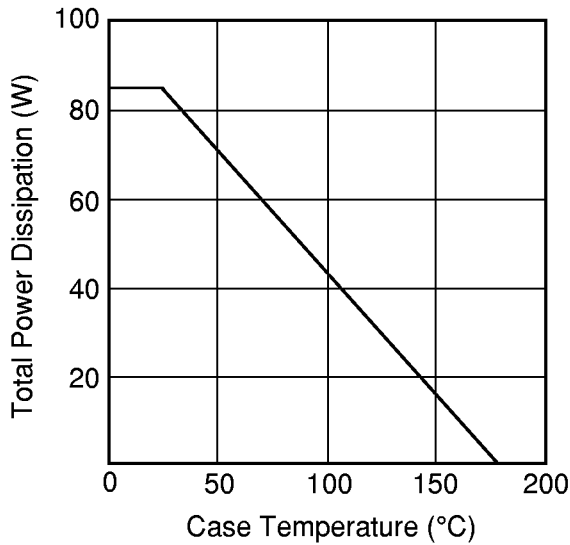
ELECTRICAL CHARACTERISTICS (Ambient Temperature $T_a=25^\circ\text{C}$)

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}$	-	8	12	A
Transconductance	g_m	$V_{DS} = 5\text{V}, I_{DS} = 4.8\text{mA}$	-	4000	-	mS
Pinch-off Voltage	V_p	$V_{DS} = 5\text{V}, I_{DS} = 480\text{mA}$	-1.0	-2.0	-3.5	V
Gate Source Breakdown Voltage	V_{GSO}	$I_{GS} = -480\mu\text{A}$	-5	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS} = 10\text{V},$ $I_{DS} = 0.6 I_{DSS}$ (Typ.), $f = 2.5 \sim 2.7 \text{GHz},$ $Z_S = Z_L = 50 \text{ohm}$	41.5	42.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		10	11	-	dB
Drain Current	I_{dsr}		-	4.8	6.0	A
Power-added Efficiency	η_{add}		-	34	-	%
Thermal Resistance	R_{th}	Channel to Case	-	1.6	1.8	$^\circ\text{C}/\text{W}$
Channel Temperature Rise	ΔT_{ch}	$10\text{V} \times I_{dsr} \times R_{th}$	-	-	80	$^\circ\text{C}$

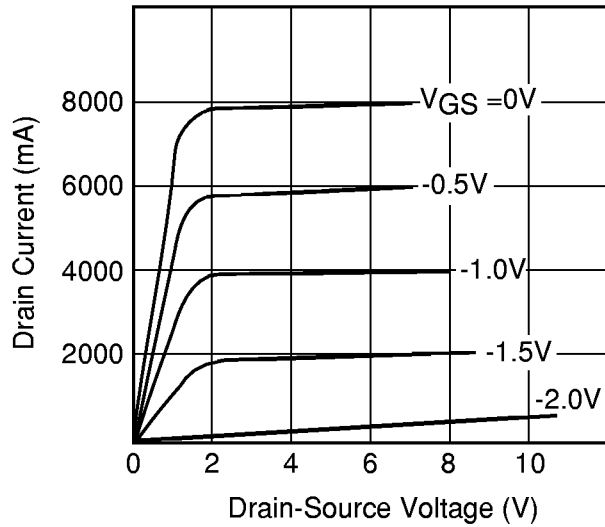
CASE STYLE: IK

G.C.P.: Gain Compression Point

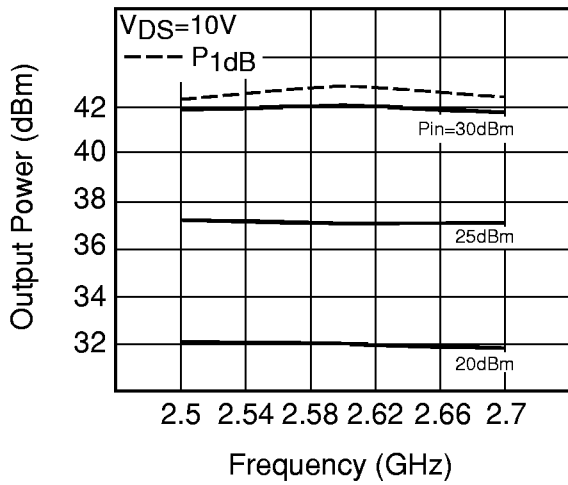
POWER DERATING CURVE



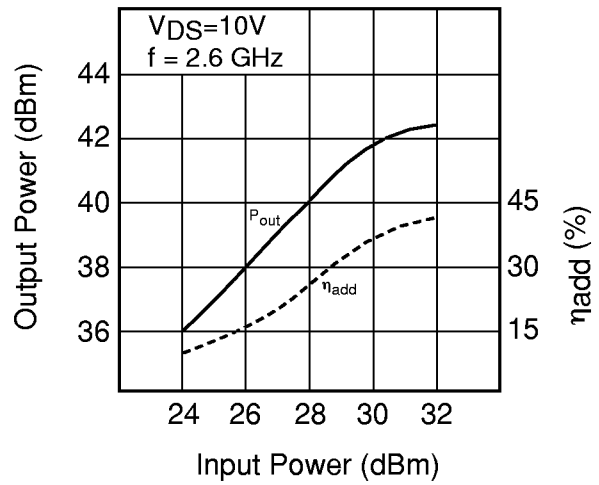
DRAIN CURRENT vs. DRAIN-SOURCE VOLTAGE

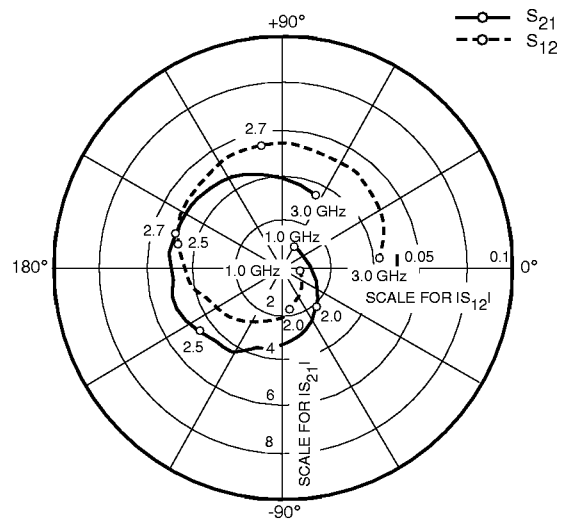
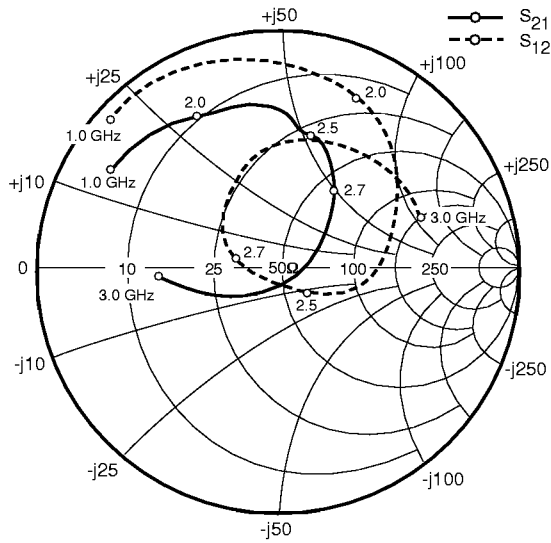


OUTPUT POWER vs. FREQUENCY



OUTPUT POWER vs. INPUT POWER





S-PARAMETERS

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

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
1000	.945	137.7	.960	42.2	.006	-2.5	.821	149.6
1100	.942	132.7	.921	29.7	.007	-5.2	.813	146.0
1200	.938	127.1	1.015	20.1	.006	-13.0	.809	143.1
1300	.935	121.6	1.118	18.2	.007	-15.2	.799	140.2
1400	.926	115.5	1.092	16.4	.008	-24.2	.785	137.2
1500	.917	109.2	1.074	4.7	.009	-28.5	.772	134.1
1600	.906	102.4	1.236	-8.6	.010	-33.2	.764	130.3
1700	.887	95.1	1.472	-15.0	.012	-44.2	.753	127.5
1800	.863	87.0	1.618	-21.0	.013	-52.8	.738	124.5
1900	.831	78.0	1.742	-34.3	.016	-67.7	.731	120.9
2000	.785	67.8	2.091	-48.8	.018	-81.6	.725	117.5
2100	.720	55.9	2.526	-61.9	.022	-98.5	.719	113.9
2200	.629	41.3	2.912	-79.6	.026	-116.3	.710	107.9
2300	.496	22.9	3.639	-101.2	.033	-139.7	.702	100.0
2400	.317	-2.1	4.510	-122.5	.040	-165.3	.659	89.1
2500	.125	-42.8	4.647	-141.3	.047	170.2	.576	77.8
2600	.174	164.2	4.887	-173.8	.052	136.2	.403	57.5
2700	.397	121.1	4.952	155.6	.055	101.5	.154	30.6
2800	.543	87.5	4.524	126.7	.053	65.6	.115	-130.5
2900	.609	54.6	3.926	97.0	.049	33.5	.316	-161.3
3000	.631	19.7	3.493	67.4	.042	5.9	.489	-177.5

Case Style "IK"
Metal-Ceramic Hermetic Package

