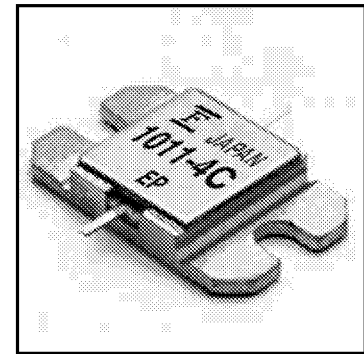


### FEATURES

- High Output Power:  $P_{1dB} = 35.5\text{dBm}$  (Typ.)
- High Gain:  $G_{1dB} = 6.0\text{dB}$  (Typ.)
- High PAE:  $\eta_{add} = 24\%$  (Typ.)
- Broad Band: 10.7 ~ 11.7GHz
- Impedance Matched  $Z_{in}/Z_{out} = 50\Omega$
- Hermetically Sealed



### DESCRIPTION

The FLM1011-4C is a power GaAs FET that is internally matched for standard communication bands to provide optimum power and gain in a 50 ohm system.

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	$P_T$	$T_C = 25^\circ\text{C}$	25	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 8.0 and -2.2 mA respectively with gate resistance of  $100\Omega$ .

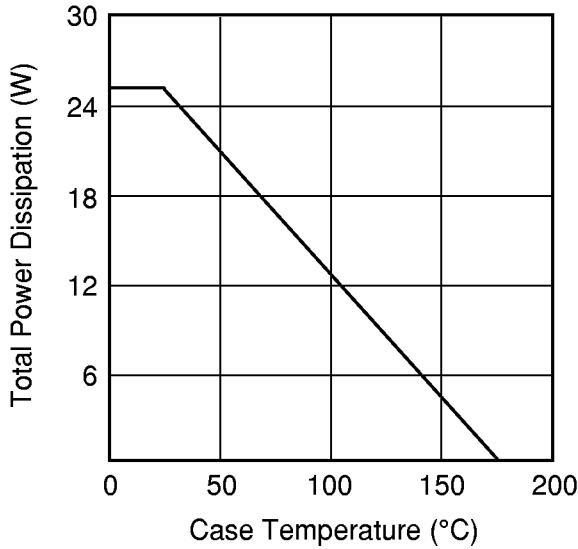
### ELECTRICAL CHARACTERISTICS (Ambient Temperature $T_a=25^\circ\text{C}$ )

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	$I_{DSS}$	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}$	-	1800	2700	mA
Transconductance	$g_m$	$V_{DS} = 5\text{V}, I_{DS} = 1100\text{mA}$	-	1000	-	mS
Pinch-off Voltage	$V_p$	$V_{DS} = 5\text{V}, I_{DS} = 90\text{mA}$	-1.0	-2.0	-3.5	V
Gate Source Breakdown Voltage	$V_{GSO}$	$I_{GS} = -90\mu\text{A}$	-5	-	-	V
Output Power at 1dB G.C.P.	$P_{1dB}$	$V_{DS} = 10\text{V},$ $I_{DS} = 0.6 I_{DSS}$ (Typ.), $f = 10.7 \sim 11.7\text{GHz},$ $Z_S = Z_L = 50\text{ohm}$	34.5	35.5	-	dBm
Power Gain at 1dB G.C.P.	$G_{1dB}$		5.0	6.0	-	dB
Drain Current	$I_{dsr}$		-	1100	1300	mA
Power-added Efficiency	$\eta_{add}$		-	24	-	%
Thermal Resistance	$R_{th}$	Channel to Case	-	5.0	6.0	$^\circ\text{C}/\text{W}$

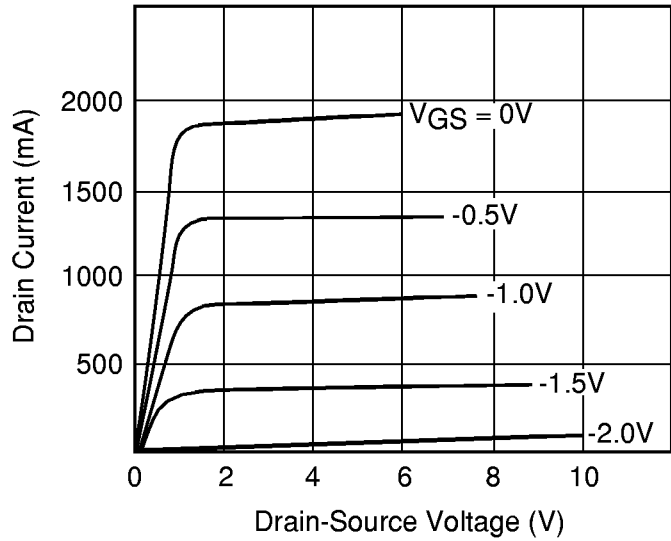
CASE STYLE: IA

G.C.P.: Gain Compression Point

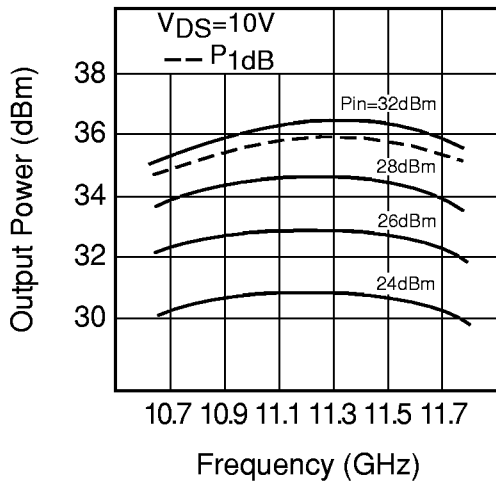
**POWER DERATING CURVE**



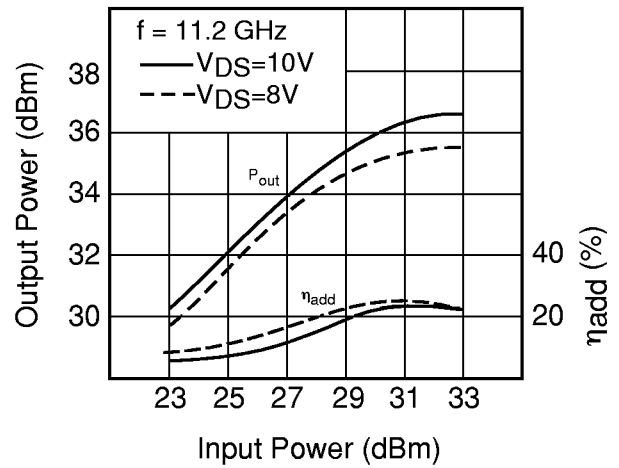
**DRAIN CURRENT vs. DRAIN-SOURCE VOLTAGE**

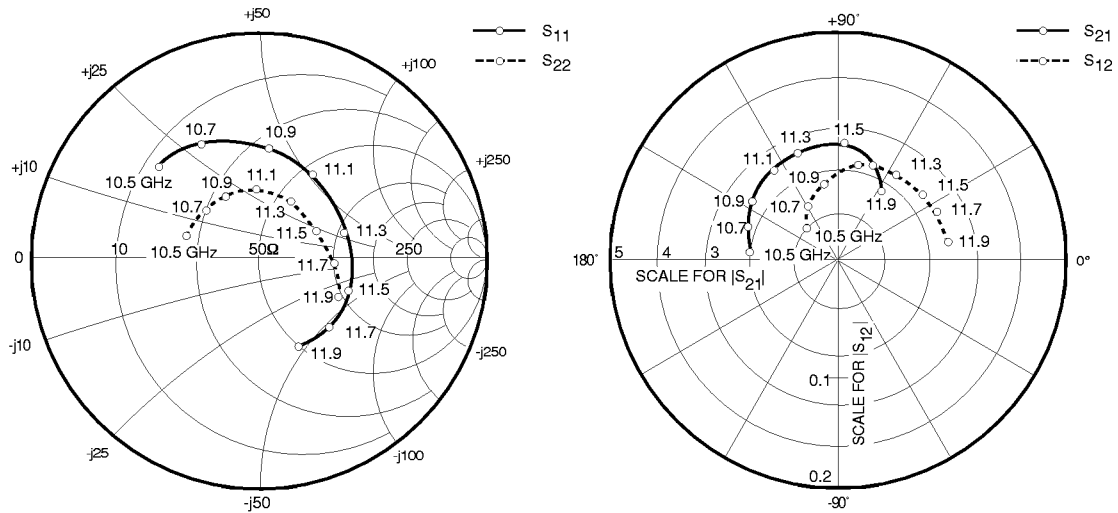


**OUTPUT POWER vs. FREQUENCY**



**OUTPUT POWER vs. INPUT POWER**





### S-PARAMETERS

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

FREQUENCY (MHZ)	S11		S21		S12		S22	
	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG
10500	.63	136	1.99	172	.04	141	.38	161
10700	.57	117	2.26	159	.06	123	.37	145
10900	.50	90	2.36	144	.07	99	.35	122
11100	.44	57	2.54	126	.09	79	.32	93
11300	.41	19	2.53	109	.09	57	.31	58
11500	.42	-16	2.52	87	.10	38	.32	24
11700	.44	-44	2.18	67	.10	26	.34	-5
11900	.44	-66	1.81	58	.10	12	.38	-22

**Case Style "IA"**  
Metal-Ceramic Hermetic Package

