

FLR014FH

K-Band Power GaAs FETs

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

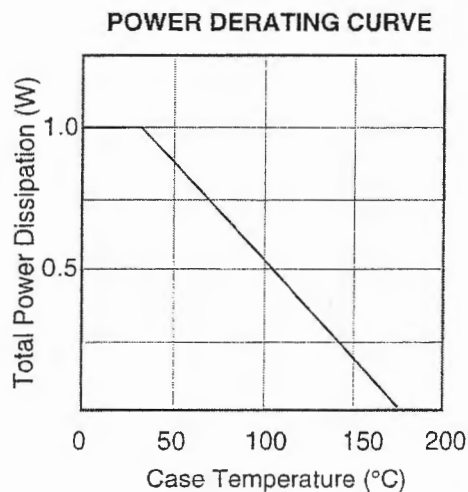
Item	Symbol	Condition	Rating	Unit
Drain-Source Voltage	V_{DS}		15	V
Gate-Source Voltage	V_{GS}		-5	V
Total Power Dissipation	P_T	$T_C=25^\circ\text{C}$	1	W
Storage Temperature	T_{stg}		-65 to +175	$^\circ\text{C}$
Channel Temperature	T_{ch}		175	$^\circ\text{C}$

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

Item	Symbol	Test Conditions	Limit			Unit
			Min.	Typ.	Max.	
Saturated Drain Current	I_{DSS}	$V_{DS} = 5\text{V}, V_{GS} = 0\text{V}$	45	60	90	mA
Transconductance	g_m	$V_{DS} = 5\text{V}, I_{DS} = 40\text{mA}$	21	30	-	mS
Pinch-off Voltage	V_p	$V_{DS} = 5\text{V}, I_{DS} = 3\text{mA}$	-1.0	-2.0	-3.5	V
Gate-Source Breakdown Voltage	V_{GSO}	$I_{GS} = -3\ \mu\text{A}$	-5	-	-	V
Output Power at 1dB G.C.P.	P_{1dB}	$V_{DS} = 10\text{V},$ $I_{DS} = 0.6 I_{DSS} (\text{Typ.})$ $f = 18\ \text{GHz}$	19	19.5	-	dBm
Power Gain at 1dB G.C.P.	G_{1dB}		6	6.5	-	dB
Power added Efficiency	η_{add}		-	19	-	%
Thermal Resistance	R_{th}	Channel to Case	-	120	150	$^\circ\text{C/W}$

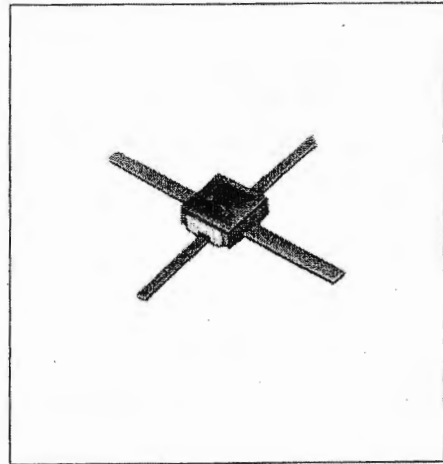
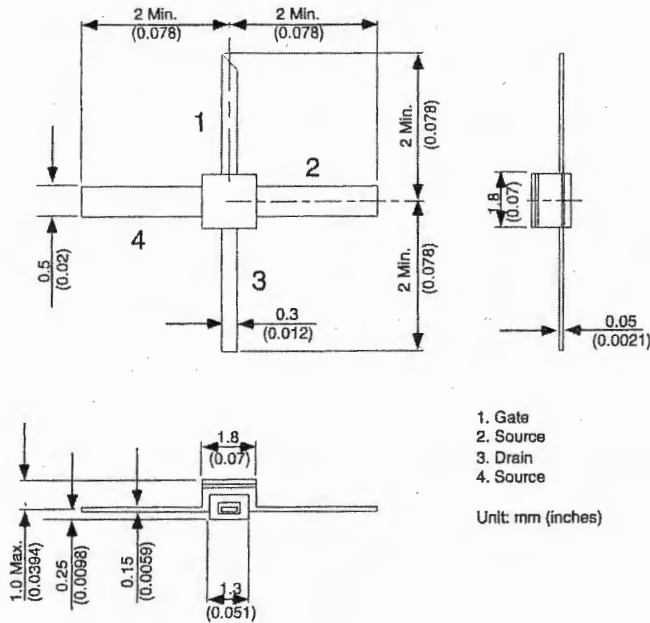
CASE STYLE: FH

G.C.P: Gain Compression Point



PACKAGE OUTLINES

Case Style "FH" Metal-Ceramic Hermetic Package



! FLR014FH.S2P 8/88
! FLR014FH
! @10V-36mA
! .1GHZ 20GHZ 22
GHZ S MA R 50
! S-parameter data

.100	1.002	-2.4	2.573	177.6	.001	69.0	.801	-2.4
.500	.997	-10.5	2.557	170.0	.007	81.6	.795	-6.9
1.000	.992	-21.4	2.551	159.7	.014	74.1	.791	-13.0
2.000	.969	-43.2	2.556	139.4	.027	60.8	.781	-25.4
3.000	.938	-65.7	2.533	118.9	.038	46.0	.761	-38.0
4.000	.894	-90.5	2.488	97.1	.047	31.3	.735	-52.1
5.000	.840	-115.6	2.370	75.2	.051	17.1	.702	-67.1
6.000	.807	-139.5	2.216	54.8	.052	5.5	.679	-82.3
7.000	.798	-161.6	2.070	35.3	.051	-4.7	.673	-97.9
8.000	.800	178.0	1.903	16.0	.048	-11.3	.677	-114.6
9.000	.801	159.5	1.718	-3.0	.046	-16.0	.688	-132.0
10.000	.789	143.1	1.507	-21.2	.043	-18.8	.697	-150.1
11.000	.782	129.6	1.310	-37.4	.042	-21.6	.704	-167.0
12.000	.794	118.4	1.161	-52.0	.041	-22.3	.723	177.9
13.000	.820	107.6	1.045	-66.3	.044	-24.8	.759	164.0
14.000	.834	98.1	.936	-80.0	.048	-31.1	.798	150.9
15.000	.828	88.7	.840	-94.0	.049	-37.6	.822	137.7
16.000	.809	80.4	.743	-107.4	.050	-47.0	.832	125.5
17.000	.799	73.0	.675	-119.5	.050	-54.2	.843	114.8
18.000	.790	65.4	.615	-132.1	.051	-64.7	.858	104.2
19.000	.789	57.6	.579	-144.4	.055	-74.3	.873	96.0
20.000	.762	49.2	.553	-158.2	.059	-86.8	.894	87.5