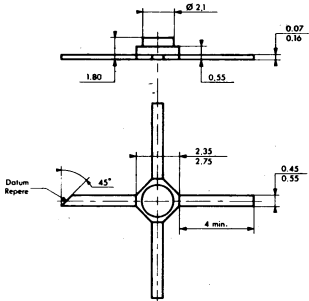
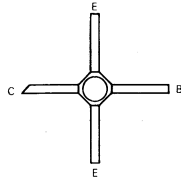


BFP 10 is a gold metallized RF transistor, in ceramic case featuring very low noise in VHF range and low intermodulation distortion.
Le BFP 10 est un transistor HF à métallisation or, en boîtier céramique présentant un très faible bruit dans la bande VHF et un faible niveau d'intermodulation.

V(BR) CEO	≥ 20 V
f _T (30 mA)	4 GHz
F (200 MHz)	1 dB
(500 MHz)	1,6 dB
GUM (500 MHz)	1,5 dB



Case CB 233
Boîtier CB 233



Marking : 1 A
Marquage : 1 A

ABSOLUTE RATINGS (LIMITING VALUES)
VALEURS LIMITES ABSOLUES D'UTILISATION

T_{amb} = 25°C

(Unless otherwise stated)
(Sauf indications contraires)

Collector-base voltage <i>Tension collecteur-base</i>	V _{CB0}	25	V
Collector-emitter voltage <i>Tension collecteur-émetteur</i>	V _{CEO}	20	V
Emitter-base voltage <i>Tension émetteur-base</i>	V _{EBO}	1	V
Collector current <i>Courant collecteur</i>	I _C	100	mA
Power dissipation <i>Dissipation de puissance</i> T _{amb} = 100°C*	P _{tot}	350	mW
Junction temperature <i>Température de jonction</i>	T _J	175	°C
Storage temperature <i>Température de stockage</i> min. max.	T _{stg}	-65 +175	°C °C

* Mounted on ceramic substrate
Monté sur substrat céramique 0,7 × 10 cm²

September 1981 1/8

*** ELECTRICAL CHARACTERISTICS – CARACTÉRISTIQUES ÉLECTRIQUES**

SYMBOLS SYMBOLES	MIN.	TYP.	MAX.	UNITS UNITÉS	TEST CONDITIONS CONDITIONS DE MESURE
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STATIC CHARACTERISTICS – CARACTÉRISTIQUES STATIQUES

V(BR)CBO	25			V	I _C = 10 μA, I _E = 0
V(BR)CEO	20			V	I _C = 3 mA, I _B = 0
I _{CBO}			100	nA	V _{CB} = 15V, I _E = 0
I _{EBO}			100	nA	V _{EB} = 1 V, I _C = 0
h _{21E}	50		250		V _{CE} = 5V, I _C = 5 mA

DYNAMIC CHARACTERISTICS – CARACTÉRISTIQUES DYNAMIQUES

f _T		4		GHz	V _{CE} = 5V, I _C = 30 mA f = 500 MHz
S _{12e} S _{21e}		-29 16		dB dB	V _{CE} = 5V, I _C = 30 mA f = 500 MHz
F		1		dB	V _{CE} = 5V, I _C = 5 mA, Y _g optimum, f = 200 MHz
		1,6		dB	V _{CE} = 5V, I _C = 5 mA, Y _g optimum, f = 500 MHz
(1) G _u max.		19,5		dB	V _{CE} = 10 V, I _C = 30 mA f = 500 MHz

$$(1) G_{u \max.} = \frac{|S_{21e}|^2}{[1 - |S_{11e}|^2][1 - |S_{22e}|^2]}$$

*T_{amb} = 25°C Unless otherwise stated – *Sauf indications contraires*

THERMAL CHARACTERISTICS – CARACTÉRISTIQUES THERMIQUES

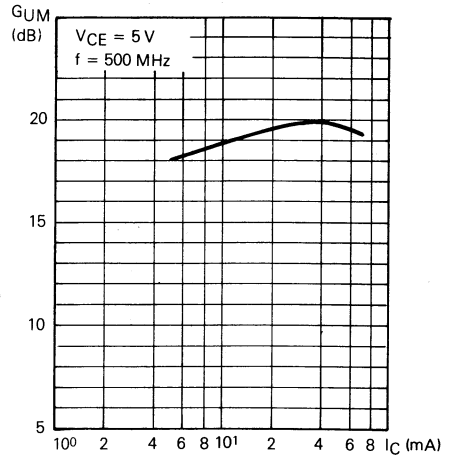
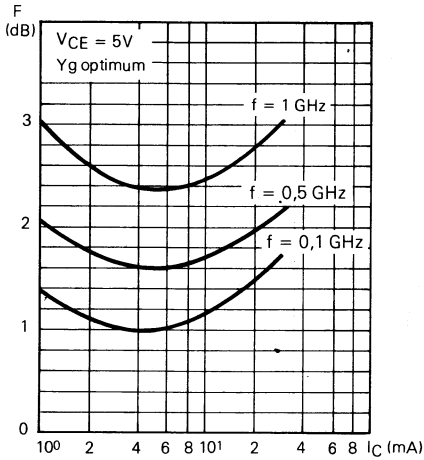
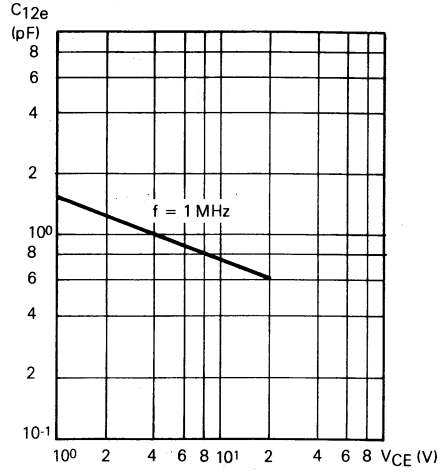
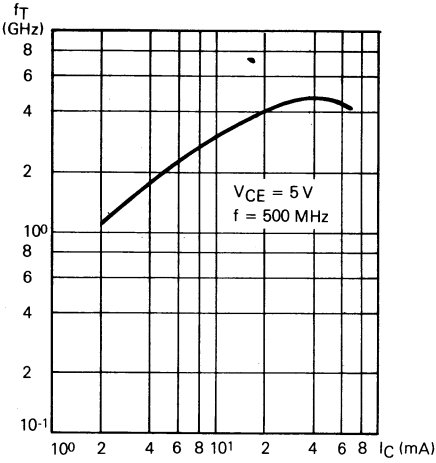
R _{th(j-c)}			140	°C/W	
*R _{th(j-a)}			200	°C/W	

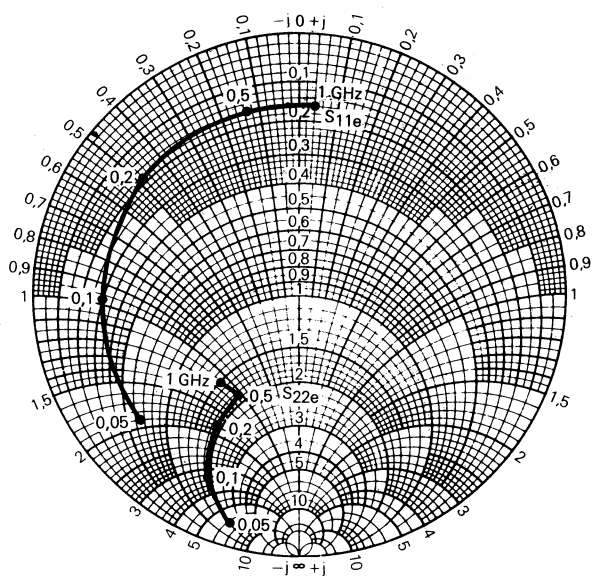
* Mounted on ceramic substrate 0,7 × 10 cm²
Monté sur substrat céramique

SCATTERING PARAMETERS — COMMON EMITTER S PARAMETERS
PARAMETRES S EMETTEUR COMMUN

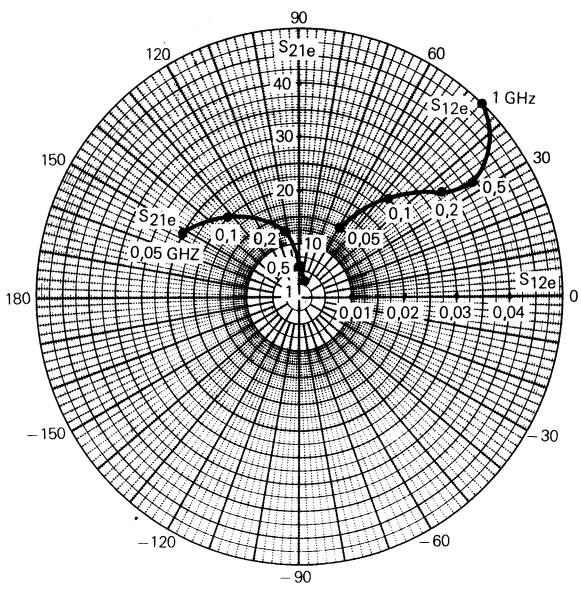
f MHz	S ₁₁		S ₂₁		S ₁₂		S ₂₂		Gu max. dB
	dB	deg	dB	deg	dB	deg	dB	deg	
V_{CE} = 5 V, I_C = 5 mA									
50	-1.6	-39	23.3	158	-33.1	68	-0.5	-14	38.3
100	-1.8	-70	22.0	142	-28.4	55	-1.4	-23	32.3
200	-2.1	-110	19.2	121	-25.3	39	-3.5	-33	26.0
500	-2.2	-155	12.9	92	-23.6	23	-6.2	-41	18.1
1000	-2.6	-180	7.4	70	-23.2	26	-6.5	-49	11.9
V_{CE} = 5 V, I_C = 10 mA									
50	-2.7	-59	28.0	150	-34.2	60	-1.1	-22	37.7
100	-2.7	-96	25.8	130	-30.5	46	-3.0	-35	32.2
200	-2.6	-133	21.7	111	-28.3	34	-6.1	-44	26.5
500	-2.5	-167	14.8	87	-26.7	31	-9.3	-48	18.9
1000	-2.9	173	9.1	69	-24.7	42	-9.3	-55	12.8
V_{CE} = 5V, I_C = 30 mA									
50	-4.3	-103	32.6	134	-37.3	48	-3.0	-38	37.7
100	-3.3	-137	28.8	115	-34.8	39	-6.5	-51	32.7
200	-2.8	-159	23.7	100	-33.1	37	-10.5	-57	27.3
500	-2.7	-179	16.2	83	-29.6	50	-13.7	-60	19.7
1000	-3.0	167	10.4	68	-25.2	60	-12.9	-62	13.7
V_{CE} = 5V, I_C = 50 mA									
50	-4.4	-123	33.7	128	-39.3	44	-4.2	-44	37.8
100	-3.2	-150	29.2	109	-37.0	39	-8.2	-55	32.8
200	-2.8	-167	23.8	97	-35.0	44	-12.3	-58	27.3
500	-2.7	-178	16.1	82	-30.2	58	-14.8	-60	19.7
1000	-3.0	166	10.4	67	-25.4	65	-13.8	-63	13.6
V_{CE} = 5 V, I_C = 70 mA									
50	-4.1	-135	33.8	124	-40.0	43	-5.1	-46	37.6
100	-3.0	-157	29.0	106	-38.1	38	-9.3	-54	32.5
200	-2.7	-170	23.4	95	-36.0	46	-13.1	-54	27.0
500	-2.6	-177	15.7	81	-30.4	61	-15.1	-56	19.3
1000	-2.9	-165	10.0	67	-25.6	66	-13.6	-61	13.3
V_{CE} = 10 V, I_C = 5 mA									
50	-1.5	-36	23.6	160	-35.1	68	-0.4	-11	39.9
100	-1.7	-65	22.5	144	-30.5	57	-1.1	-19	33.8
200	-2.0	-105	19.8	123	-27.2	40	-2.8	-26	27.3
500	-2.3	-152	13.6	93	-25.3	26	-4.9	-32	19.2
1000	-2.7	-179	8.2	72	-24.7	29	-5.1	-39	13.1
V_{CE} = 10 V, I_C = 10 mA									
50	-2.5	-52	28.2	152	-36.4	61	-0.8	-17	39.3
100	-2.6	-89	26.2	133	-32.2	47	-2.3	-27	33.5
200	-2.7	-127	22.4	113	-29.7	36	-4.8	-33	27.5
500	-2.7	-164	15.6	89	-28.1	33	-7.1	-35	19.9
1000	-3.1	175	9.9	71	-26.1	46	-7.1	-41	13.8
V_{CE} = 10 V, I_C = 30 mA									
50	-4.2	-90	33.0	137	-38.6	47	-2.3	-29	38.9
100	-3.5	-127	29.5	118	-36.1	40	-5.1	-38	33.7
200	-3.2	-154	24.5	102	-34.1	39	-8.3	-39	28.1
500	-3.0	-176	17.1	84	-30.6	51	-10.4	-37	20.5
1000	-3.4	169	11.3	69	-26.4	60	-9.8	-43	14.5
V_{CE} = 10 V, I_C = 50 mA									
50	-4.4	-107	34.2	131	-39.9	44	-3.3	-34	38.9
100	-3.6	-140	30.1	112	-37.5	39	-6.6	-40	33.7
200	-3.2	-161	24.8	99	-35.6	43	-9.6	-38	28.1
500	-3.1	-179	17.1	83	-31.1	57	-11.2	-36	20.4
1000	-3.4	168	11.3	68	-26.4	65	-10.2	-42	14.4

BFP 10

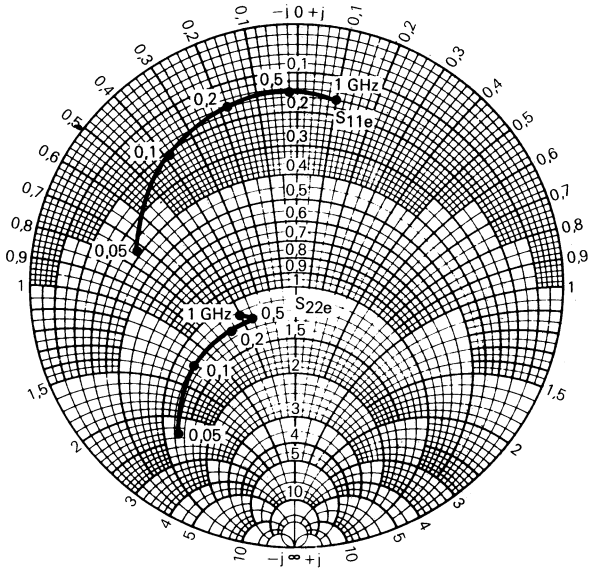




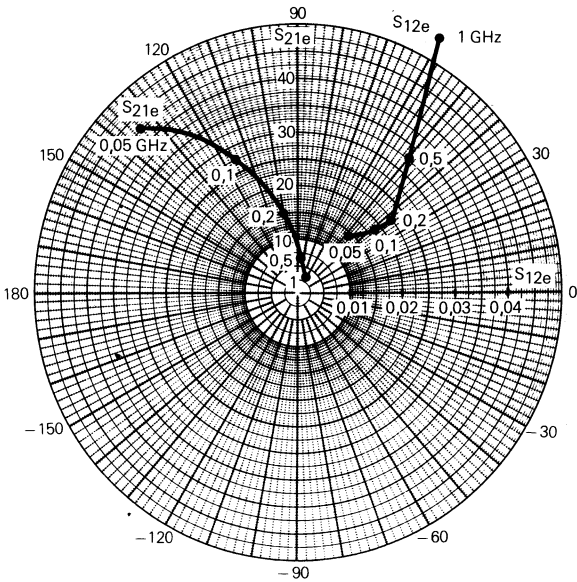
$V_{CE} = 10\text{ V}$
 $I_C = 10\text{ mA}$
 $Z = 50\ \Omega$



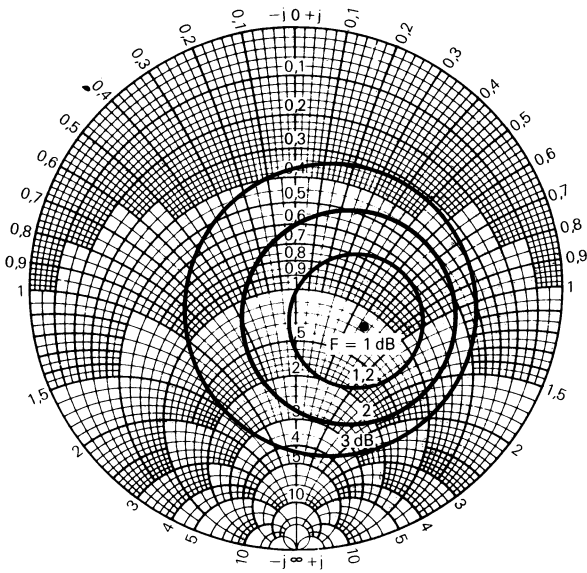
BFP 10



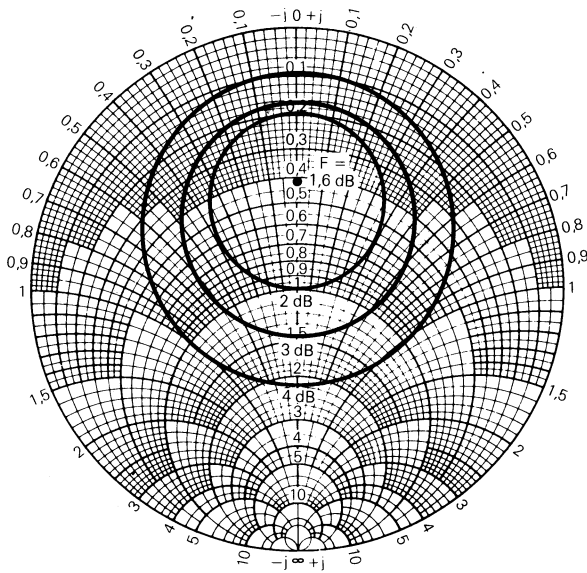
$V_{CE} = 5\text{ V}$
 $I_C = 30\text{ mA}$
 $Z = 50\ \Omega$



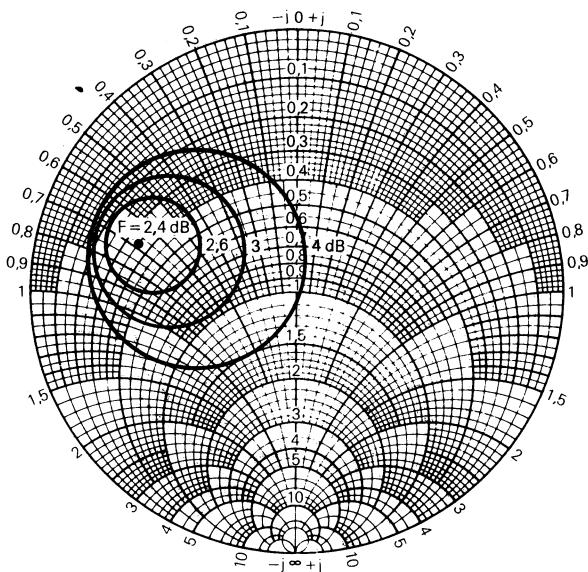
$V_{CE} = 5\text{ V}$
 $I_C = 4\text{ mA}$
 $F = 0,1\text{ GHz}$
 $Z = 50\ \Omega$



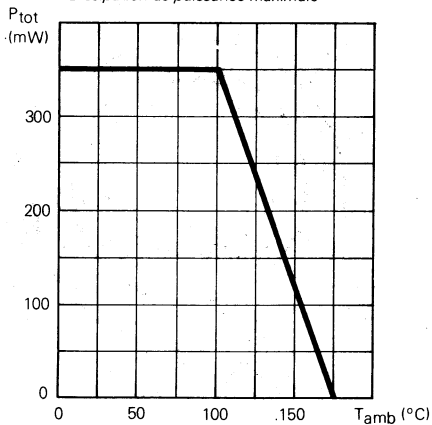
$V_{CE} = 5\text{ V}$
 $I_C = 6\text{ mA}$
 $F = 0,5\text{ GHz}$
 $Z = 50\ \Omega$



$V_{CE} = 5\text{ V}$
 $I = 6\text{ mA}$
 $f = 1\text{ GHz}$
 $Z = 50\ \Omega$



Maximum power dissipation
Dissipation de puissance maximale (1)

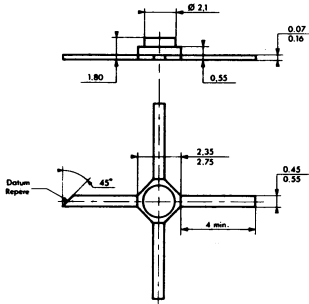


(1) Mounted on ceramic substrate $0.7\text{ mm} \times 10\text{ cm}^2$
Monté sur substrat céramique de $0,7\text{ mm} \times 10\text{ cm}^2$

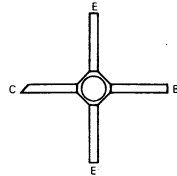
BFP 91 is a gold metallized RF transistor, in ceramic case featuring high gain and low noise. It is particularly intended for broadband amplifiers up to 1 GHz (instrumentation, radar, telecommunication).

Le BFP 91 est un transistor HF à métallisation or, en boîtier céramique présentant un gain élevé et un faible bruit. Il est particulièrement destiné aux amplificateurs large bande jusqu'à 1 GHz (instrumentation, radar, télécommunication).

V(BR) CEO	≥ 12 V
f _T (30 mA)	6,5 GHz
G _{UM} (500 MHz)	21 dB
F (100 MHz)	1,1 dB
(1 GHz)	2,3 dB



Case CB 233
Boîtier CB 233



Marking
Marquage : 1 B

ABSOLUTE RATINGS (LIMITING VALUES)
VALEURS LIMITES ABSOLUES D'UTILISATION

T_{amb} = 25°C

(Unless otherwise stated)
(Sauf indications contraires)

Collector-base voltage <i>Tension collecteur-base</i>	V _{CB0}	15	V
Collector-emitter voltage <i>Tension collecteur-émetteur</i>	V _{CEO}	12	V
Emitter-base voltage <i>Tension émetteur-base</i>	V _{EBO}	2	V
Collector current <i>Courant collecteur</i>	I _C	80	mA
Power dissipation <i>Dissipation de puissance</i> T _{amb} = 100°C*	P _{tot}	350	mW
Junction temperature <i>Température de jonction</i>	T _j	175	°C
Storage temperature <i>Température de stockage</i>	T _{stg}	-65 +175	°C °C

* Mounted on ceramic substrate
Monté sur substrat céramique 0,7 × 10 cm²

* ELECTRICAL CHARACTERISTICS – CARACTÉRISTIQUES ÉLECTRIQUES

SYMBOLS SYMBOLES	MIN.	TYP.	MAX.	UNITS UNITÉS	TEST CONDITIONS CONDITIONS DE MESURE
STATIC CHARACTERISTICS* – CARACTÉRISTIQUES STATIQUES					
V(BR)CBO	15			V	I _C = 10 μA, I _E = 0
V(BR)CEO	12			V	I _C = 1 mA, I _B = 0
I _{CBO}			50	nA	V _{CB} = 5V, I _E = 0
V(BR)EBO	2			V	I _E = 10 μA, I _C = 0
h _{21E}	40		120		V _{CE} = 5V, I _C = 30 mA

DYNAMIC CHARACTERISTICS – CARACTÉRISTIQUES DYNAMIQUES

f _T		6,5		GHz	V _{CE} = 5V, I _C = 30 mA f = 500 MHz
S _{12e} S _{21e}		-27 18,5		dB dB	V _{CE} = 5V, I _C = 30 mA f = 500 MHz
C _{12e}		0,65		pF	V _{CB} = 5V, I _C = 0, f = 1 MHz Emitter grounded, <i>Emetteur à la masse</i>
F		1,1		dB	V _{CE} = 5V, I _C = 5mA, f = 100MHz Y _S optimum
		2,3		dB	V _{CE} = 5V, I _C = 5 mA, f = 1 GHz Y _S optimum
(1) G _U max.		21		dB	V _{CE} = 5 V, I _C = 30 mA f = 500 MHz

$$(1) G_{U \max.} = \frac{|S_{21e}|^2}{[1 - |S_{11e}|^2][1 - |S_{22e}|^2]}$$

*T_{amb} = 25°C Unless otherwise stated – *Sauf indications contraires*

THERMAL CHARACTERISTICS – CARACTÉRISTIQUES THERMIQUES

R _{th(j-c)}			140	°C/W	
*R _{th(j-a)}			200	°C/W	

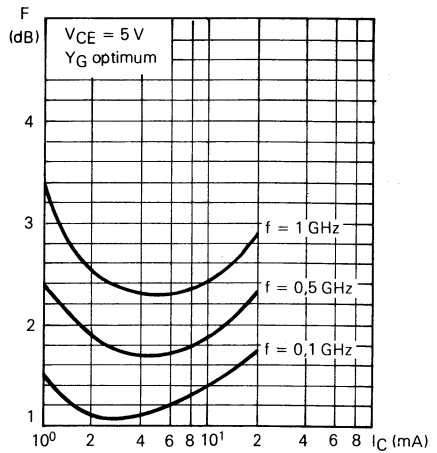
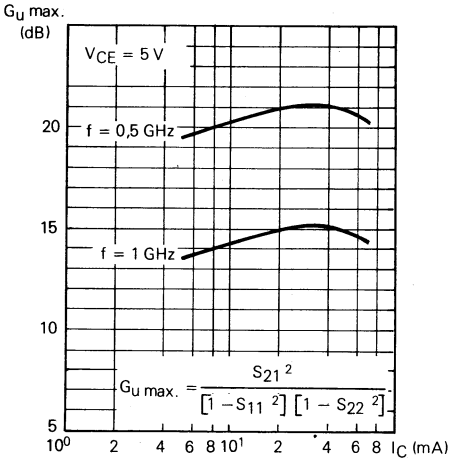
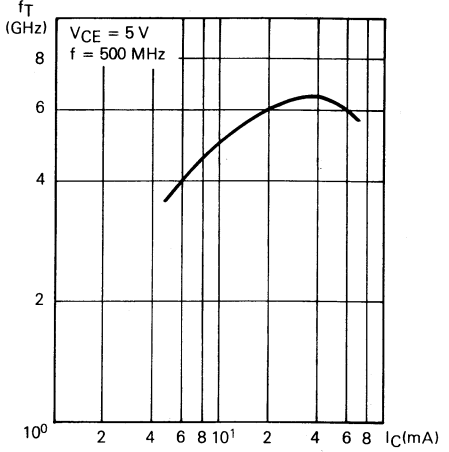
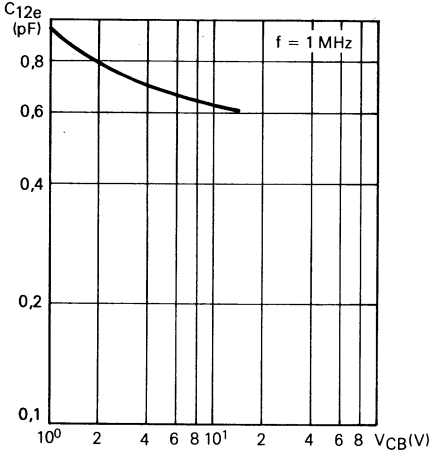
* Mounted on ceramic substrate 0,7 × 10 cm²
Monté sur substrat céramique

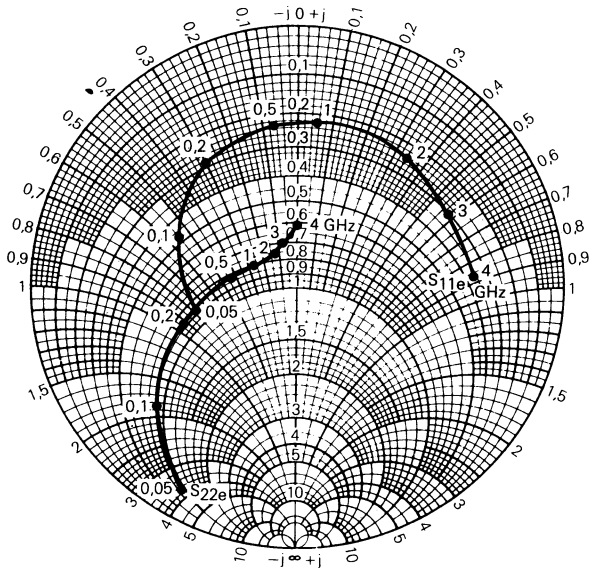
S PARAMETERS (COMMON EMITTER)
PARAMETRES S (EMETTEUR COMMUN)

BFP 91

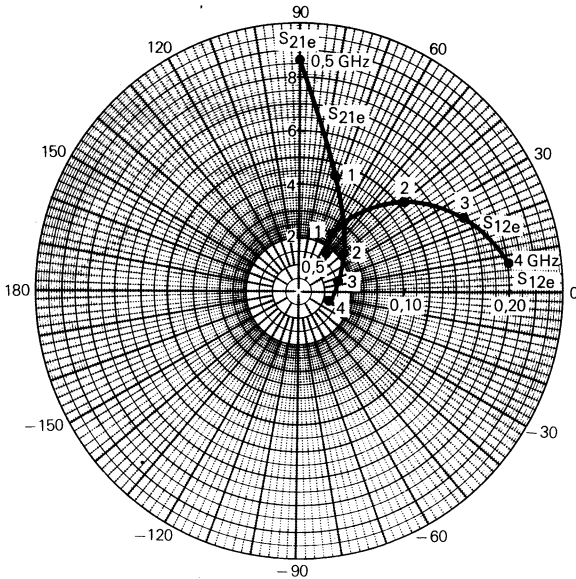
f MHz	S ₁		S ₂₁		S ₁₂		S ₂₂		Gum
	dB	deg	dB	deg	dB	deg	dB	deg	
5 mA - 5 V									
50	- 2.3	- 24	23.0	165	- 34.3	75	- 0.3	- 12	39.2
100	- 2.5	- 46	22.4	153	- 29.2	66	- 0.7	- 22	34.0
200	- 2.9	- 81	20.7	134	- 24.8	52	- 2.3	- 37	27.7
500	- 3.4	- 134	15.7	102	- 21.5	34	- 6.0	- 57	19.6
1000	- 4.1	- 166	10.6	80	- 20.0	33	- 8.3	- 65	13.5
2000	- 4.0	149	4.6	35	- 17.8	19	- 10.9	- 101	7.3
3000	- 3.9	125	1.3	6	- 15.9	10	- 10.0	- 128	4.0
4000	- 3.8	99	- 0.8	- 23	- 14.2	- 2	- 8.4	- 154	2.2
10 mA - 5 V									
50	- 4.3	- 38	27.4	160	- 35.6	69	- 0.5	- 18	38.9
100	- 4.3	- 69	26.4	144	- 30.7	60	- 1.5	- 33	33.6
200	- 4.2	- 108	23.6	124	- 27.1	47	- 4.1	- 51	27.8
500	- 4.0	- 153	17.5	96	- 24.3	40	- 8.9	- 73	20.3
1000	- 4.5	- 177	12.1	77	- 21.7	45	- 11.4	- 80	14.3
2000	- 4.0	143	5.8	37	- 17.9	30	- 14.3	- 123	8.2
3000	- 3.9	119	2.5	9	- 15.5	17	- 12.9	- 145	5.0
4000	- 3.7	95	0.4	- 18	- 13.6	2	- 10.7	- 164	3.2
30 mA - 5 V									
50	- 8.4	- 77	31.9	150	- 37.8	63	- 1.3	- 30	38.5
100	- 6.2	- 114	29.7	131	- 34.1	52	- 3.3	- 50	33.6
200	- 4.8	- 144	25.7	112	- 31.1	46	- 7.1	- 72	28.4
500	- 4.3	- 171	18.7	90	- 27.2	53	- 12.3	- 97	21.0
1000	- 4.6	174	13.1	74	- 22.7	59	- 14.8	- 103	15.1
2000	- 3.8	140	6.9	38	- 18.0	39	- 16.4	- 154	9.3
3000	- 3.7	117	3.4	12	- 15.4	24	- 14.7	- 167	6.0
4000	- 3.5	94	1.4	- 14	- 13.3	8	- 12.6	- 179	4.2
50 mA - 5 V									
50	- 9.2	- 101	33.0	146	- 39.2	61	- 1.7	- 34	38.4
100	- 6.1	- 131	30.3	126	- 35.2	52	- 4.2	- 56	33.6
200	- 4.7	- 155	25.9	108	- 32.7	52	- 8.4	- 78	28.4
500	- 4.2	- 175	18.7	88	- 27.8	58	- 13.4	- 102	21.0
1000	- 4.5	171	12.9	73	- 22.8	62	- 15.5	- 105	14.9
2000	- 3.6	140	6.7	38	- 18.2	42	- 16.0	- 156	9.3
3000	- 3.5	117	3.2	12	- 15.6	27	- 14.2	- 168	5.9
4000	- 3.4	94	1.2	- 13	- 13.4	10	- 12.2	- 180	4.1
5 mA - 10 V									
50	- 2.1	- 23	23.2	166	- 35.2	75	- 0.3	- 11	39.8
100	- 2.3	- 43	22.7	154	- 29.9	67	- 0.7	- 20	34.7
200	- 2.8	- 77	21.1	135	- 25.4	53	- 2.1	- 34	28.5
500	- 3.5	- 131	16.2	104	- 22.1	36	- 5.7	- 53	20.2
1000	- 4.3	- 163	11.2	81	- 20.4	35	- 7.8	- 60	14.0
2000	- 4.2	152	5.1	37	- 18.1	21	- 10.1	- 89	7.6
3000	- 4.1	126	1.7	8	- 16.3	11	- 9.4	- 116	4.4
4000	- 4.0	101	- 0.4	- 20	- 14.6	- 1	- 8.0	- 142	2.6
10 mA - 10 V									
50	- 3.8	- 34	27.5	161	- 36.2	68	- 0.6	- 17	39.1
100	- 3.9	- 63	26.6	145	- 31.2	60	- 1.5	- 30	34.2
200	- 4.1	- 102	24.0	125	- 27.5	48	- 3.8	- 47	28.4
500	- 4.2	- 149	18.0	97	- 24.5	40	- 8.5	- 67	20.8
1000	- 4.8	- 174	12.6	78	- 22.0	45	- 10.9	- 72	14.7
2000	- 4.3	146	6.4	39	- 18.2	31	- 13.8	- 104	8.6
3000	- 4.2	121	3.1	11	- 15.8	18	- 12.6	- 128	5.4
4000	- 3.9	97	0.9	- 16	- 13.9	3	- 10.7	- 151	3.6

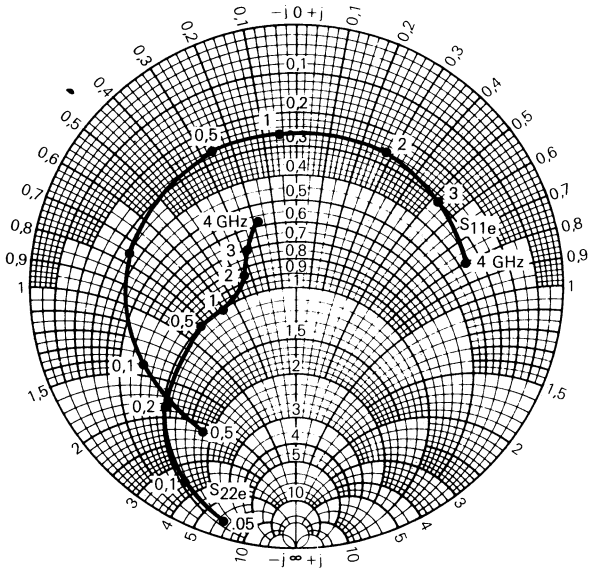
TYPICAL CHARACTERISTICS
 CARACTERISTIQUES TYPIQUES



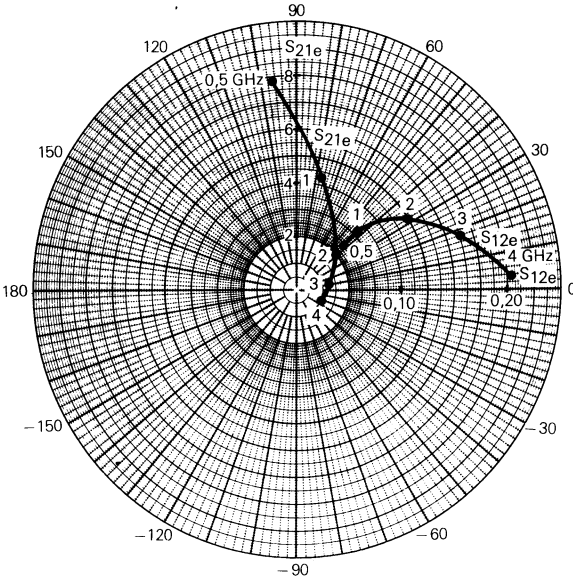


$V_{CE} = 5 \text{ V}$
 $I_C = 30 \text{ mA}$
 $Z = 50 \Omega$

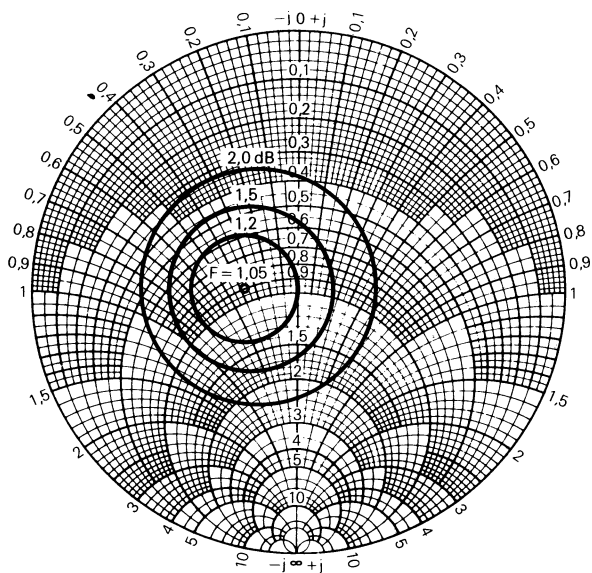




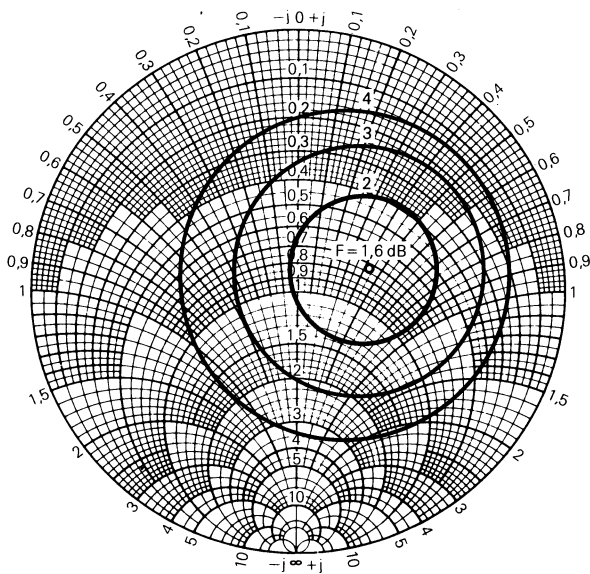
$V_{CE} = 10 \text{ V}$
 $I_C = 10 \text{ mA}$
 $Z = 50 \Omega$



$V_{CE} = 5\text{ V}$
 $I_C = 4\text{ mA}$
 $f = 0,1\text{ GHz}$
 $Z = 50\ \Omega$

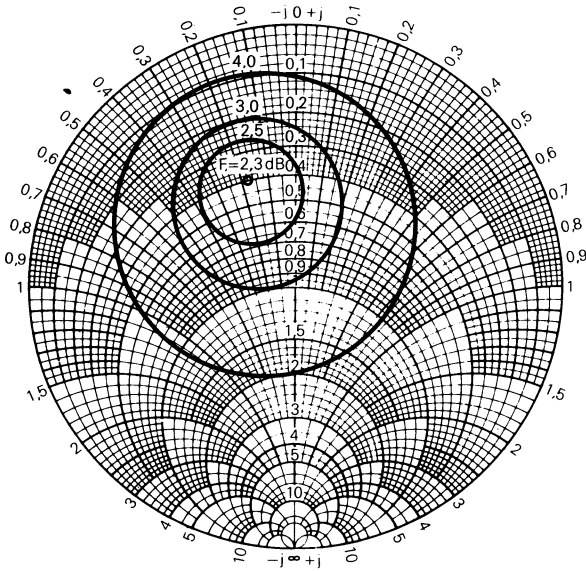


$V_{CE} = 5\text{ V}$
 $I_C = 5\text{ mA}$
 $f = 0,5\text{ GHz}$
 $Z = 50\ \Omega$

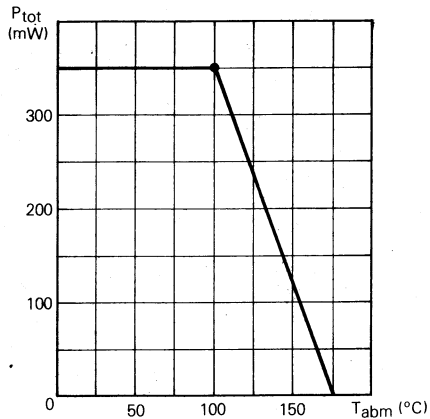


BFP 91

$V_{CE} = 5\text{ V}$
 $I_C = 5\text{ mA}$
 $f = 1\text{ GHz}$
 $Z = 50\ \Omega$



Maximum power dissipation (1)
Dissipation de puissance maximale

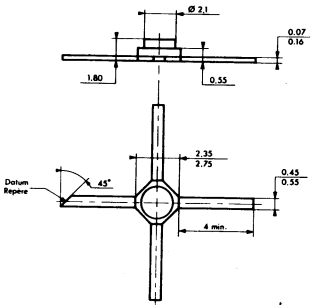


(1) Mounted on ceramic substrate $0.7\text{ mm} \times 10\text{ cm}^2$
Monté sur substrat céramique de $0,7\text{ mm} \times 10\text{ cm}^2$

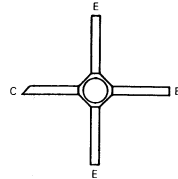
BFP 96 is a gold metallized RF transistor, in ceramic case featuring high gain and low intermodulation. It is particularly intended for broadband amplifiers up to 1 GHz (instrumentation, radar, telecommunication).

Le BFP 96 est un transistor HF à métallisation or, en boîtier céramique présentant un gain élevé et un faible niveau d'intermodulation. Il est particulièrement destiné aux amplificateurs large bande jusqu'à 1 GHz (instrumentation, radar, télécommunication).

$V_{(BR)} CEO$	$\geq 15 V$
f_T (50 mA)	4,5 GHz
G_U max (500 MHz)	18 dB



Case CB 233
Boîtier CB 233



Marking : 1 C

ABSOLUTE RATINGS (LIMITING VALUES) VALEURS LIMITES ABSOLUES D'UTILISATION

$T_{amb} = 25^{\circ}C$

(Unless otherwise stated)
(Sauf indications contraires)

Parameter	Symbol	Value	Unit
Collector-base voltage <i>Tension collecteur-base</i>	V_{CB0}	25	V
Collector-emitter voltage <i>Tension collecteur-émetteur</i>	V_{CEO}	15	V
Emitter-base voltage <i>Tension émetteur-base</i>	V_{EBO}	3	V
Collector current <i>Courant collecteur</i>	I_C	120	mA
Power dissipation <i>Dissipation de puissance</i> $T_{amb} = 75^{\circ}C^*$	P_{tot}	500	mW
Junction temperature <i>Température de jonction</i>	T_j	175	$^{\circ}C$
Storage temperature <i>Température de stockage</i>	T_{stg}	-65 +150	$^{\circ}C$

* Mounted on ceramic substrate $0,7 \times 10 \text{ cm}^2$
Monté sur substrat céramique

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* ELECTRICAL CHARACTERISTICS – CARACTÉRISTIQUES ÉLECTRIQUES

SYMBOLS SYMBOLES	MIN.	TYP.	MAX.	UNITS UNITÉS	TEST CONDITIONS CONDITIONS DE MESURE
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STATIC CHARACTERISTICS – CARACTÉRISTIQUES STATIQUES

V _{(BR)CBO}	20			V	I _C = 10 μA, I _E = 0
V _{(BR)CEO}	15			V	I _C = 1 mA, I _B = 0
I _{CBO}			100	nA	V _{CB} = 10V, I _E = 0
V _{BR(E)BO}	3			V	I _E = 10 μA, I _C = 0
h _{21E}	40		120		V _{CE} = 5V, I _C = 50 mA

DYNAMIC CHARACTERISTICS – CARACTÉRISTIQUES DYNAMIQUES

f _T		4,5		GHz	V _{CE} = 5V, I _C = 50 mA f = 500 MHz
S _{12e} S _{21e}		-26,5 14,5		dB dB	V _{CE} = 5V, I _C = 50 mA f = 500 MHz
C _{12e}		1,4		pF	V _{CB} = 5V, I _E = 0, f = 1 MHz Emitter grounded, <i>Emetteur à la masse</i>
F		2,5		dB	V _{CE} = 5V, I _C = 10mA, Y _g optimum, f = 500 MHz
(1) G _U max.		18		dB	V _{CE} = 5 V, I _C = 50 mA f = 500 MHz

$$(1) G_U \text{ max.} = \frac{|S_{21e}|^2}{[1 - |S_{11e}|^2][1 - |S_{22e}|^2]}$$

*T_{amb} = 25°C Unless otherwise stated – *Sauf indications contraires* *

THERMAL CHARACTERISTICS – CARACTÉRISTIQUES THERMIQUES

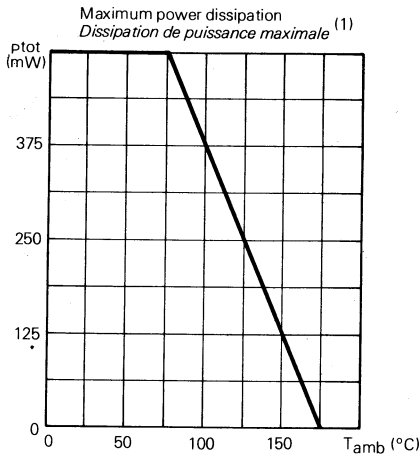
R _{th(j-c)}			140	°C/W	
*R _{th(j-a)}			200	°C/W	

* Mounted on ceramic substrate
Monté sur substrat céramique 0,7 × 10 cm²

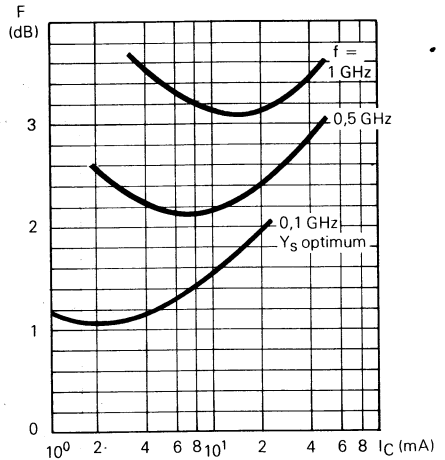
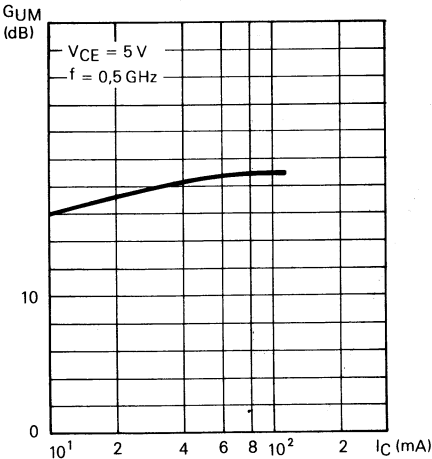
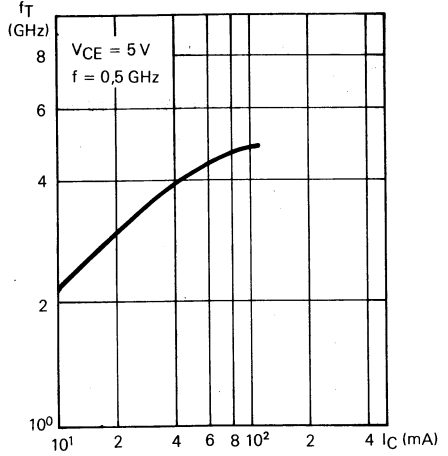
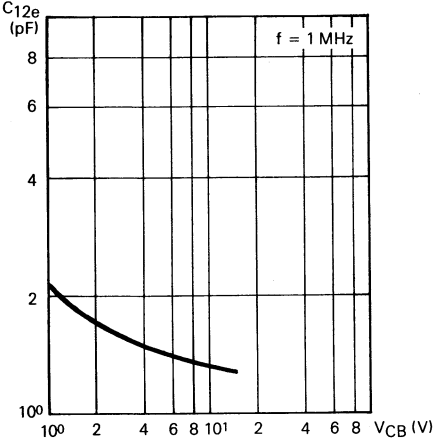
COMMON EMITTER S PARAMETERS
PARAMETRES S EMETTEUR COMMUN

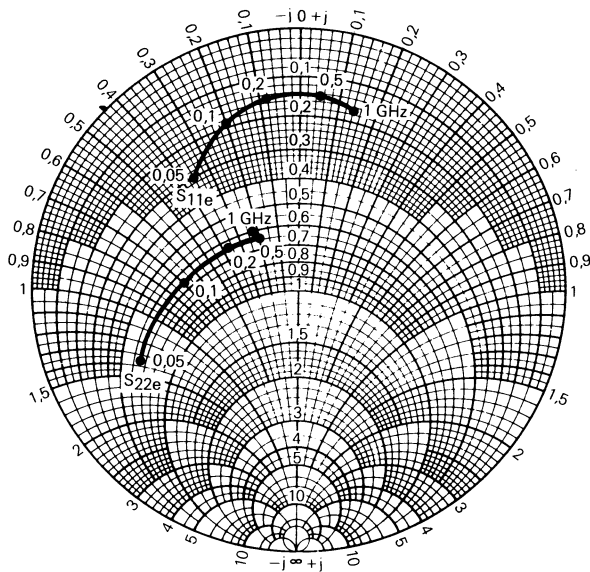
BFP 96

f MHz	S ₁₁ dB deg		S ₂₁ dB deg		S ₁₂ dB deg		S ₂₂ dB deg		G _{um}
V_{CE} = 5 V, I_C = 10 mA									
50	- 4.0	- 77	26.7	143	- 31.3	56	- 1.6	- 33	34.0
100	- 3.1	- 116	23.8	122	- 28.0	40	- 4.2	- 52	28.7
200	- 2.6	- 148	19.2	102	- 26.6	28	- 7.9	- 69	23.5
500	- 2.5	- 174	11.9	77	- 25.0	26	- 10.2	- 84	15.9
1000	- 2.9	169	6.0	54	- 22.8	31	- 8.6	- 96	9.9
V_{CE} = 5 V, I_C = 20 mA									
50	- 4.9	- 99	29.2	137	- 33.2	51	- 2.4	- 44	34.6
100	- 3.4	- 134	25.7	117	- 30.5	37	- 5.6	- 67	29.8
200	- 2.7	- 158	20.7	99	- 29.0	31	- 9.5	- 88	24.6
500	- 2.6	- 179	13.1	77	- 26.5	37	- 11.9	- 105	16.9
1000	- 2.9	166	7.4	56	- 22.7	41	- 10.4	- 110	10.9
V_{CE} = 5 V, I_C = 50 mA									
50	- 4.8	- 137	31.9	128	- 36.6	45	- 3.8	- 65	36.0
100	- 3.2	- 157	27.5	109	- 34.5	40	- 7.3	- 95	31.3
200	- 2.6	- 171	22.1	95	- 32.6	43	- 10.1	- 123	26.0
500	- 2.6	176	14.3	77	- 27.7	53	- 11.6	- 142	18.1
1000	- 3.0	163	8.7	59	- 22.7	53	- 11.4	- 141	12.1
V_{CE} = 5 V, I_C = 70 mA									
50	- 4.5	- 144	32.5	126	- 37.8	44	- 4.3	- 71	36.4
100	- 3.1	- 161	27.9	107	- 35.8	42	- 7.6	- 102	31.7
200	- 2.6	- 173	22.4	94	- 33.3	47	- 10.0	- 130	26.3
500	- 2.6	175	14.6	77	- 27.7	56	- 11.1	- 147	18.5
1000	- 2.9	162	9.0	59	- 22.6	54	- 11.3	- 147	12.4
V_{CE} = 5 V, I_C = 100 mA									
50	- 4.2	- 151	32.8	123	- 39.0	46	- 4.8	- 77	36.7
100	- 2.9	- 165	28.0	106	- 36.8	43	- 8.0	- 109	31.9
200	- 2.5	- 175	22.3	93	- 33.8	51	- 9.9	- 136	26.3
500	- 2.5	174	14.7	77	- 28.0	58	- 10.8	- 152	18.6
1000	- 2.9	162	9.1	60	- 22.7	56	- 11.1	- 152	12.5

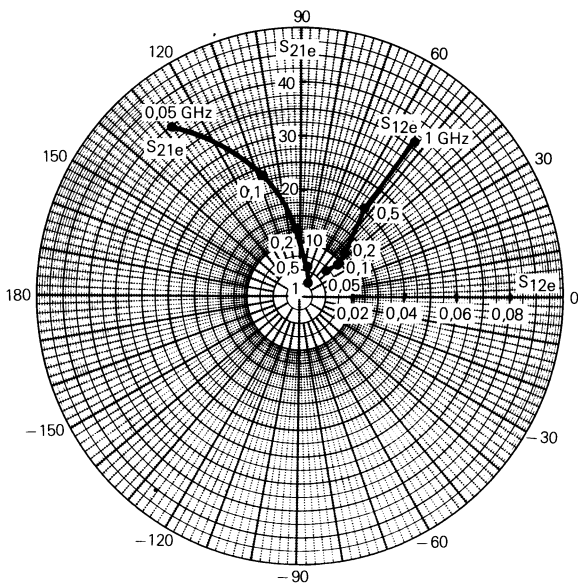


(1) Mounted on ceramic substrate 0,7 × 10 cm²
 Monté sur substrat céramique



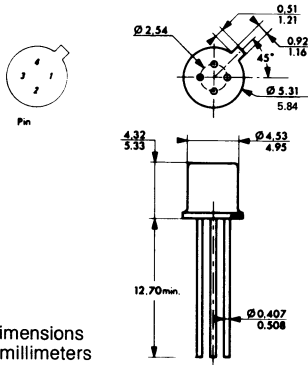


V_{CE} = 5 V
 I_C = 50 mA
 Z = 50 Ω



Le BFT 50 est un transistor HF à faible bruit destiné à l'usage général dans les bandes HF et VHF.

BFT 50 is a low noise RF transistor intended for general purpose in HF and VHF band.



V_{CEO} 22 V
 f_T 3,5 GHz
 $G_{u \text{ max}}$ 22 dB } 200 MHz
 F 1 dB }

Case : TO-72 (CB-4)

Vue de dessous
Bottom view



Masse : 0,7 g.
Weight

VALEURS LIMITES ABSOLUES D'UTILISATION
ABSOLUTE RATINGS (LIMITING VALUES)

$T_{amb} = 25^\circ\text{C}$

V_{CBO}	Tension collecteur-base Collector-base voltage	35	V
V_{CEO}	Tension collecteur-émetteur Collector-emitter voltage	22	V
V_{EBO}	Tension émetteur-base Emitter-base voltage	2,5	V
I_C	Courant collecteur Collector current	60	mA
P_{tot}	Dissipation de puissance Power dissipation	250	mW
T_j	Température de jonction Junction temperature	+200	$^\circ\text{C}$
T_{stg}	Température de stockage Storage temperature	- 65 + 200	$^\circ\text{C}$

$T_{case} = 25^\circ\text{C}$

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		CONDITIONS DE MESURE TEST CONDITIONS		MIN. TYP. MAX.	
$V_{(BR)CBO}$	Tension de claquage collecteur-base Collector-base breakdown voltage	$I_C = 10 \mu\text{A}$ $I_E = 0$		35	V
$V_{(BR)CEO}$	Tension de claquage collecteur-émetteur Collector-emitter breakdown voltage	$I_C = 1 \text{mA}$ $I_B = 0$		22	V
I_{CBO}	Courant résiduel collecteur-base Collector-base cut-off current	$V_{CB} = 15 \text{V}$ $I_E = 0$		10	nA
$V_{(BR)EBO}$	Tension de claquage émetteur-base Emitter-base breakdown voltage	$I_E = 10 \mu\text{A}$ $I_C = 0$		2,5	V
h_{21E}	Valeur statique du rapport de transfert Static forward current transfer ratio	$V_{CE} = 1 \text{V}$ $I_C = 30 \text{mA}$ $I_E = 2 \text{mA}$		20	125 20 150

CARACTERISTIQUES DYNAMIQUES
 DYNAMIC CHARACTERISTICS

f_T	Fréquence de transition Transition frequency	$V_{CE} = 5 \text{V}$ $I_C = 10 \text{mA}$		3,5	GHz
C_{12e}	Capacité de transfert inverse Reverse transfer capacitance	$V_{CB} = 5 \text{V}$ $I_E = 0$		0,6	pF
S_{12e} S_{12e}	Paramètres S S parameters	$V_{CE} = 5 \text{V}$ $I_C = 10 \text{mA}$ $f = 200 \text{MHz}$		-27 19	dB
F	Facteur de bruit Noise figure	$V_{CE} = 5 \text{V}$ $I_C = 2 \text{mA}$ $R_G \text{ optimum}$ $f = 500 \text{MHz}$ $f = 200 \text{MHz}$		1,8 2,5 1,0	dB
* $G_{U \text{ max}}$	Gain maximal en puissance Maximum power gain	$V_{CE} = 5 \text{V}$ $I_C = 10 \text{mA}$ $f = 200 \text{MHz}$		22	dB

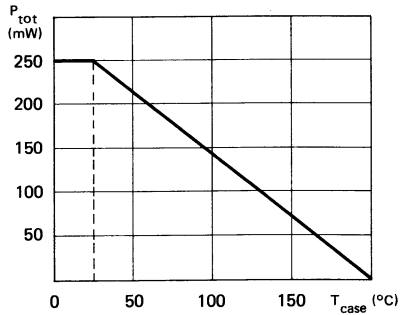
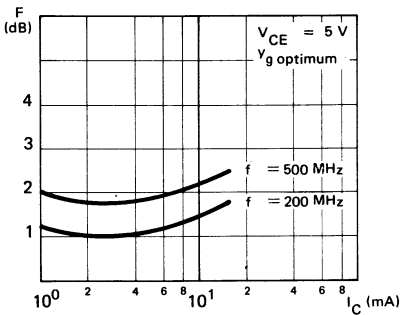
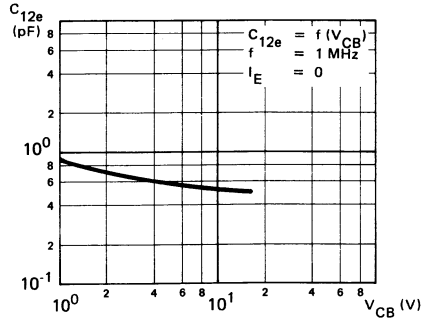
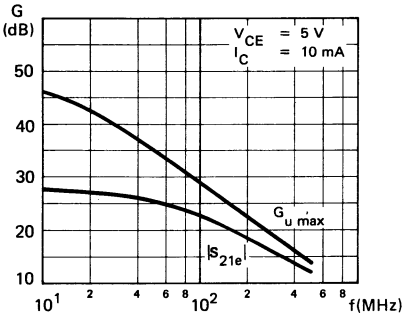
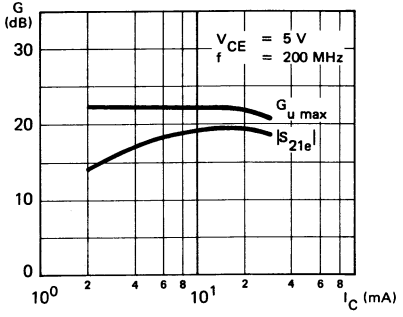
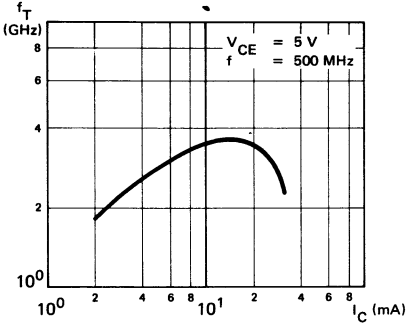
$$*G_{U \text{ max}} = \frac{|S_{21e}|^2}{[1 - |S_{11e}|^2][1 - |S_{22e}|^2]}$$

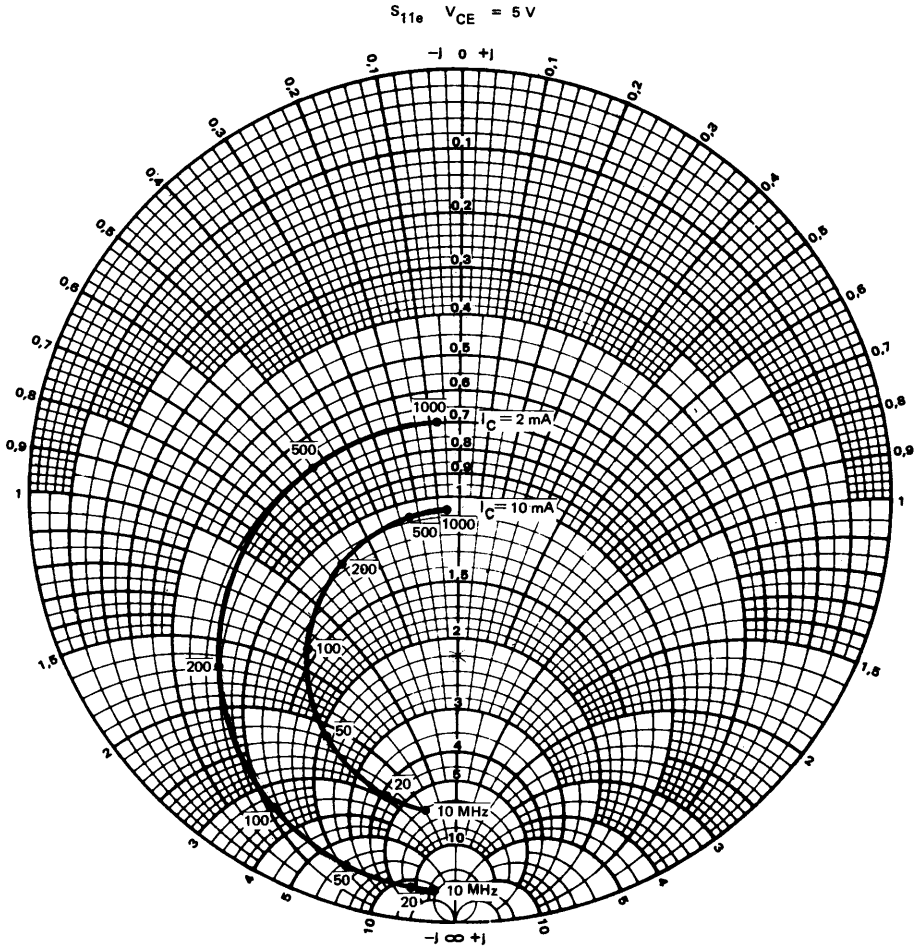
PARAMETRES "S" EMETTEUR COMMUN
SCATTERING PARAMETERS – COMMON EMITTER

f MHz	S ₁₁		S ₂₁		S ₁₂		S ₂₂	
	dB	Deg.	dB	Deg.	dB	Deg.	dB	Deg.
V_{CE} = 5 V, I_C = 2 mA								
10	-0,8	-3	16,8	176	-48,1	76	-0,1	-1
20	-0,7	-6	16,8	173	-42,7	77	-0,1	-3
50	-0,8	-16	16,4	164	-35,2	77	-0,2	-6
100	-1,5	-30	15,7	151	-29,6	71	-0,5	-11
200	-3,3	-54	14	130	-25,1	62	-1,3	-18
500	-9	-101	9,3	92	-21	56	-3,1	-27
V_{CE} = 5 V, I_C = 5 mA								
10	-1,7	-5	23,4	174	-48,7	75	-0,1	-2
20	-1,7	-9	23,4	169	-42,4	76	-0,2	-4
50	-2,1	-22	22,4	155	-35,7	74	-0,5	-9
100	-3,6	-39	20,9	137	-30,8	69	-1,3	-15
200	-6,9	-61	17,7	115	-26,4	65	-2,6	-20
500	-14,8	-92	11,4	84	-20,9	67	-4,1	-24
V_{CE} = 5 V, I_C = 10 mA								
10	-2,9	-6	27,8	171	-49,4	75	-0,2	-3
20	-3	-13	27,4	164	-43,8	75	-0,3	-6
50	-3,7	-28	25,8	145	-36,4	73	-0,9	-12
100	-6,1	-44	23,3	126	-31,6	69	-2,1	-17
200	-10,1	-60	19	106	-27,2	70	-3,4	-19
500	-18,4	-74	12,1	80	-20,6	70	-4,6	-22
V_{CE} = 5 V, I_C = 20 mA								
10	-4,6	-8	31,1	167	-49,8	71	-0,3	-4
20	-4,8	-17	30,4	157	-43,8	73	-0,5	-8
50	-5,9	-33	27,7	136	-37,2	73	-1,5	-14
100	-9	-49	24,3	117	-32,6	72	-2,8	-17
200	-13,4	-60	19,4	100	-27,6	73	-3,9	-17
500	-22	-64	12,2	77	-20,4	73	-4,8	-20
V_{CE} = 5 V, I_C = 30 mA								
10	-5,8	-13	31,9	164	-49,6	73	-0,5	-5
20	-6,3	-26	31	152	-43,6	71	-0,9	-9
50	-8,1	-54	26,9	128	-37	67	-2,1	-13
100	-11,9	-81	22,7	110	-32,8	70	-3,2	-14
200	-16,7	-116	17,5	95	-28	73	-3,9	-14
500	-20,1	-172	10,2	73	-20,6	75	-4,5	-20

BFT 50

CARACTERISTIQUES TYPIQUES
TYPICAL CHARACTERISTICS





BFT 50

CARACTERISTIQUES TYPIQUES
TYPICAL CHARACTERISTICS

