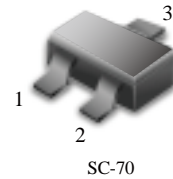


High-Frequency Amplifier Transistor (11V, 50mA, 3.2GHz)

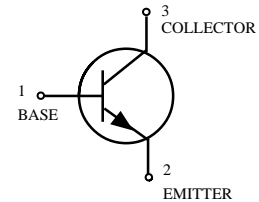
Features

- 1) High transition frequency. (Typ. $f_T = 3.2\text{GHz}$)
- 2) Small $r_{bb'} \cdot C_c$ and high gain. (Typ. 4ps)
- 3) Small NF.



Ordering information

Device	Marking	Shipping
FTC4083	4N	3000/Tape&Reel
FTC4083	4N	10000/Tape&Reel



Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Limits	Unit
Collector- base voltage	V_{CBO}	20	V
Collector- emitter voltage	V_{CEO}	11	V
Emitter- base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	- 55~ +150	°C

Electrical characteristics (Ta=25 °C)

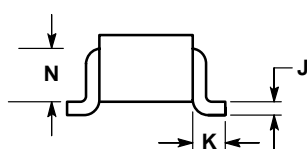
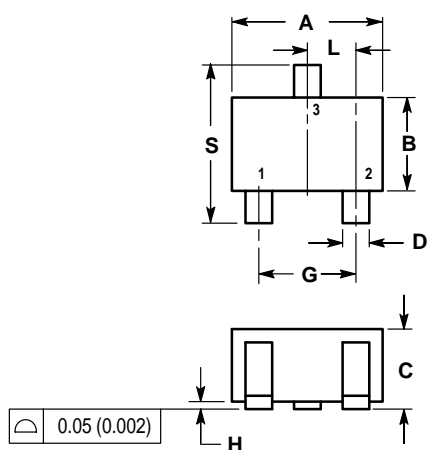
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector- base breakdown voltage	BV_{CBO}	20			V	$I_c = 10\mu\text{A}$
Collector- emitter breakdown voltage	BV_{CEO}	11			V	$I_c = 1\text{mA}$
Emitter- base breakdown voltage	BV_{EBO}	3			V	$I_e = 10\mu\text{A}$
Collector cutoff current	I_{cbo}			0.5	uA	$V_{CB} = 10\text{V}$
Emitter cutoff current	I_{EBO}			0.5	uA	$V_{EB} = 2\text{V}$
Collector- emitter saturation voltage	$V_{CE(sat)}$			0.5	V	$I_c/I_b = 10\text{mA}/5\text{mA}$
DC current transfer ratio	h_{FE}	56		120		$V_{CE}/I_c = 10\text{V}/5\text{mA}$
Transition frequency	f_T	1.4	3.2		GHz	$V_{CB} = 10\text{V}$, $I_c = 10\text{mA}$, $f = 500\text{MHz}$
Output capacitance	C_{ob}		0.8	1.5	pF	$V_{CB} = 10\text{V}$, $I_e = 0\text{A}$, $f = 1\text{MHz}$
Collector- base time constant	$r_{bb'} \cdot C_c$		4	12	ps	$V_{CB} = 10\text{V}$, $I_c = 10\text{mA}$, $f = 31.8\text{MHz}$
Noise factor	NF		3.5		dB	$V_{CE} = 6\text{V}$, $I_c = 2\text{mA}$, $f = 500\text{MHz}$, $R_g = 50\Omega$

FTC4083

SC-70

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.032	0.040	0.80	1.00
D	0.012	0.016	0.30	0.40
G	0.047	0.055	1.20	1.40
H	0.000	0.004	0.00	0.10
J	0.004	0.010	0.10	0.25
K	0.017 REF		0.425 REF	
L	0.026 BSC		0.650 BSC	
N	0.028 REF		0.700 REF	
S	0.079	0.095	2.00	2.40

- PIN 1. BASE
 2. EMITTER
 3. COLLECTOR

