

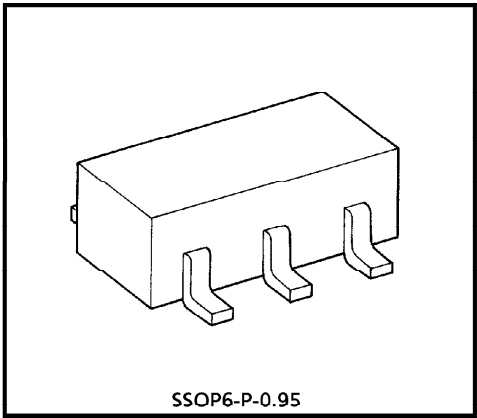
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA4100F

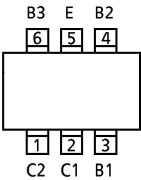
UHF VHF RF, MIX APPLICATION

FEATURES

- High f_T . ($f_T = 5\text{GHz}$)
- Differential Circuit is Composed of 3 Transistors.

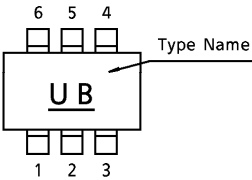


PIN ASSIGNMENT (TOP VIEW)



C ... COLLECTOR
B ... BASE
E ... EMITTER

MARKING



Weight : 0.013g (Typ.)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	10	V
Collector-Emitter Voltage	V_{CEO}	5	V
Collector Current	I_C	15 (*1), 30 (*2)	mA
Total Power Dissipation	P_D (*3)	300	mW
Operating Temperature	T_{opr}	- 40~85	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55~125	$^\circ\text{C}$

(*1) Q1, Q2 (*2) Q3

(*3) When mounted on the glass epoxy board of $2.5\text{cm}^2 \times 1.6\text{t}$

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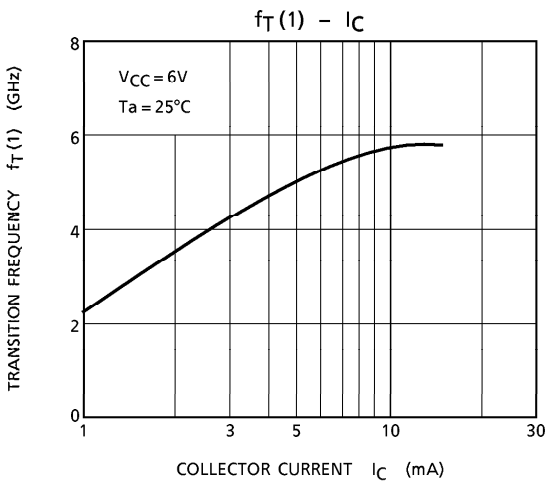
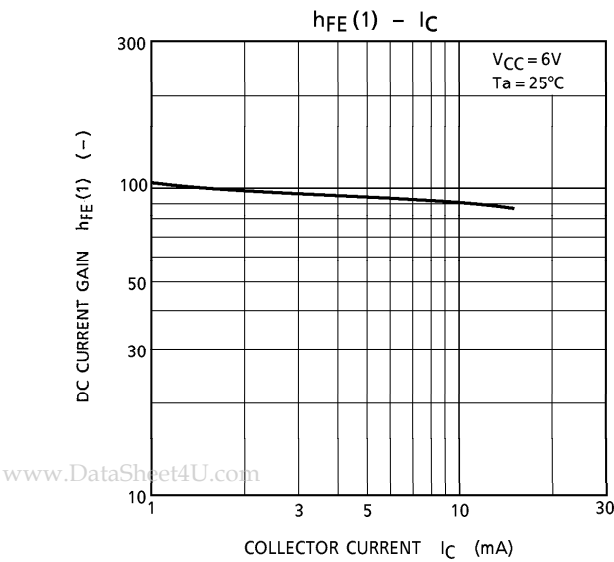
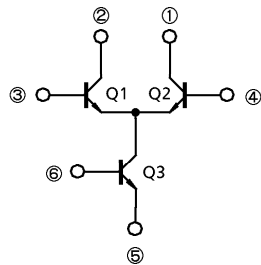
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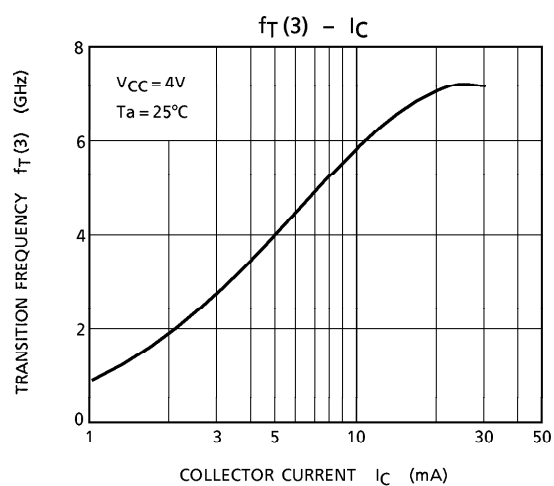
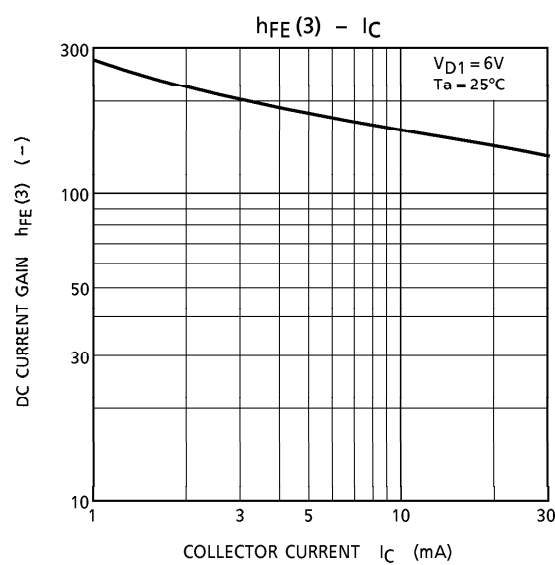
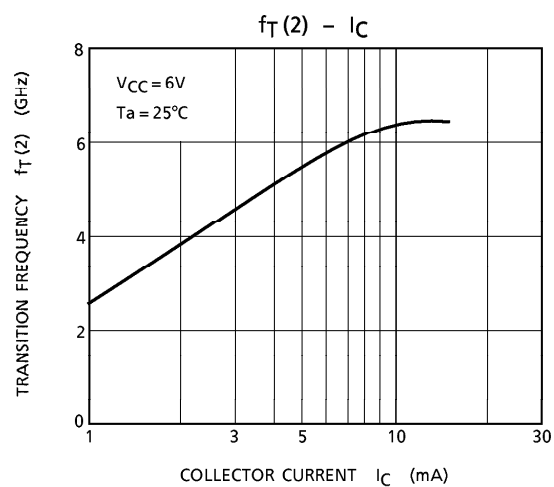
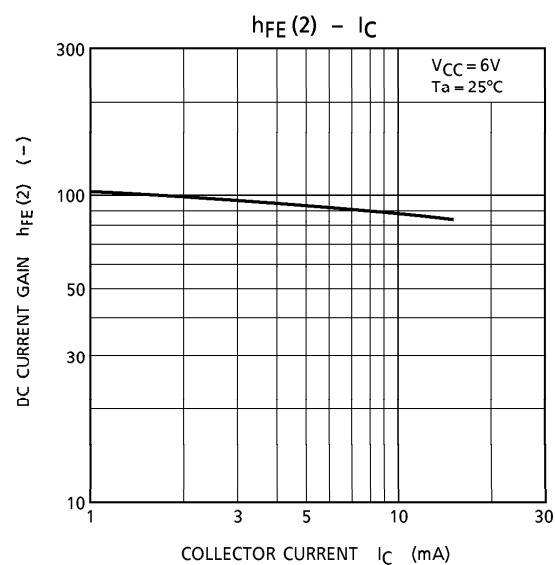
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Voltage	V_{CEO} (1)	—	$I_{C1} = 1.0\text{mA}$, $(I_{B3} = 1\text{mA})$	5	—	—	V
	V_{CEO} (2)	—	$I_{C2} = 1.0\text{mA}$, $(I_{B3} = 1\text{mA})$	5	—	—	
	V_{CEO} (3)	—	I_{B1} (I_{C3}) = 1.0mA	5	—	—	
DC Current Gain	h_{FE} (1)	—	$V_{C1} = 6\text{V}$, $I_{C1} = 5\text{mA}$, $(I_{B3} = 1\text{mA})$	50	100	160	—
	h_{FE} (2)	—	$V_{C2} = 6\text{V}$, $I_{C1} = 5\text{mA}$, $(I_{B3} = 1\text{mA})$	50	100	160	
	h_{FE} (3)	—	V_{B1} (V_{C3}) = 6V, I_{B1} (I_{C3}) = 10mA	70	140	250	
Transition Frequency	f_T (1)	—	$V_{C1} = 6\text{V}$, $I_{C1} = 5\text{mA}$, $(I_{B3} = 1\text{mA})$	3.5	5.0	7.0	GHz
	f_T (2)	—	$V_{C2} = 6\text{V}$, $I_{C2} = 5\text{mA}$, $(I_{B3} = 1\text{mA})$	3.5	5.0	7.0	
	f_T (3)	—	V_{B1} (V_{C3}) = 4V, I_{B1} (I_{C3}) = 10mA	3.5	5.0	7.0	

- ※ (1) ... Characteristics of Q1
(2) ... Characteristics of Q2
(3) ... Characteristics of Q3

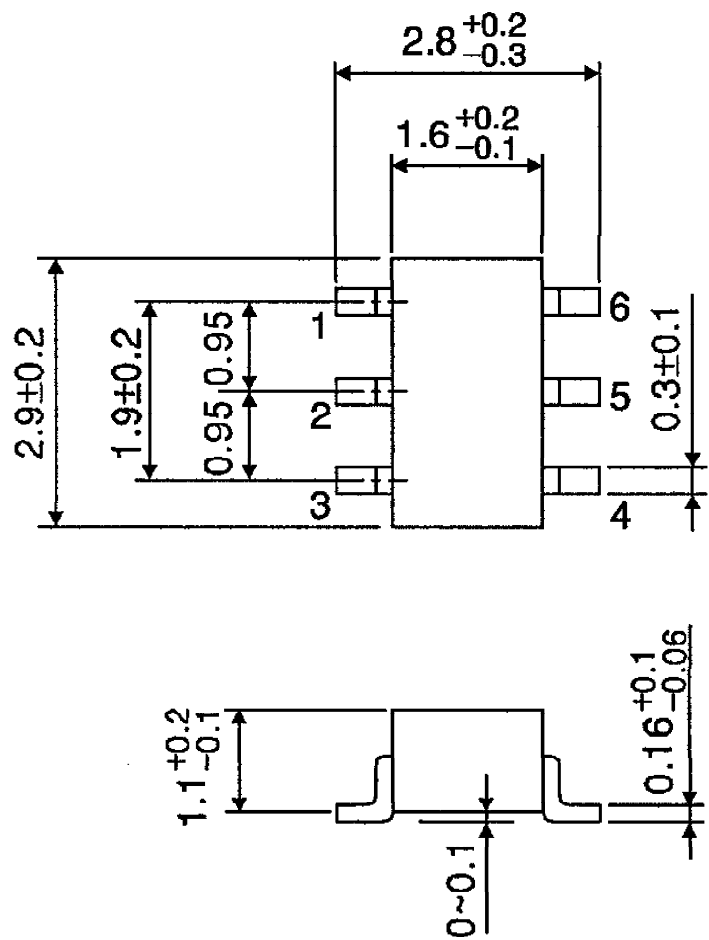
EQUIVALENT CIRCUIT





OUTLINE DRAWING
SSOP6-P-0.95

Unit : mm



Weight : 0.013g (Typ.)