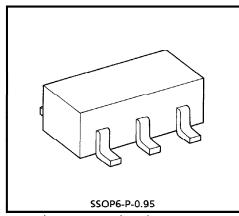
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

# TA4100F

## **UHF VHF RF, MIX APPLICATION**

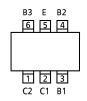
### **FEATURES**

- High f<sub>T</sub>. (f<sub>T</sub> = 5GHz)
- Differential Circuit is Composed of 3 Transistors.



Weight: 0.013g (Typ.)

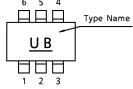
### PIN ASSIGNMENT (TOP VIEW)



C ... COLLECTOR

B ... BASE E ... EMITTER

## **MARKING**



### **MAXIMUM RATING** (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	10	V
Collector-Emitter Voltage	V <sub>CEO</sub>	5	٧
Collector Current	IC	15 (*1), 30 (*2)	mΑ
Total Power Dissipation	P <sub>D</sub> (*3)	300	mW
Operating Temperature	T <sub>opr</sub>	- 40~85	°C
Storage Temperature Range	T <sub>stg</sub>	- 55~125	°C

- (\*1) Q1, Q2
- (\*2) Q3
- (\*3) When mounted on the glass epoxy board of 2.5cm<sup>2</sup> x 1.6t

961001EBA2

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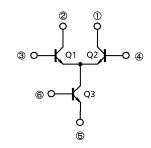
### **ELECTRICAL CHARACTERISTICS** (Ta = 25°C)

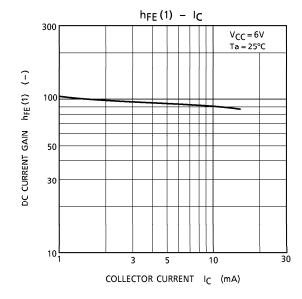
CHARACTERISTIC	SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Voltage	V <sub>CEO</sub> (1)	_	$I_{C1} = 1.0 \text{mA}, (I_{B3} = 1 \text{mA})$	5	_	_	V
	V <sub>CEO</sub> (2)		$I_{C2} = 1.0 \text{mA}, (I_{B3} = 1 \text{mA})$	5	<b>—</b>	_	
	V <sub>CEO</sub> (3)	_	$I_{B1}(I_{C3})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

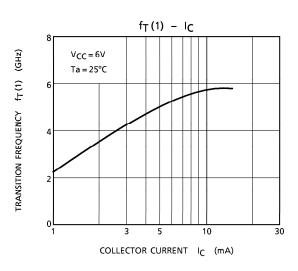
(1) ... Characteristics of Q1(2) ... Characteristics of Q2

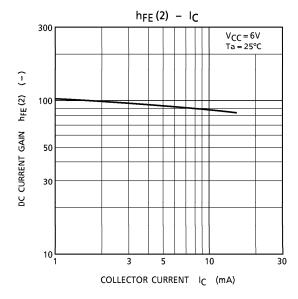
(3) ... Characteristics of Q3

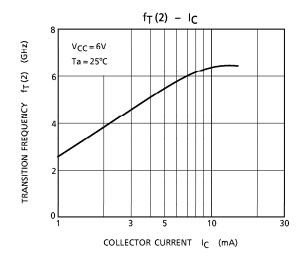
### **EQUIVALENT CIRCUIT**

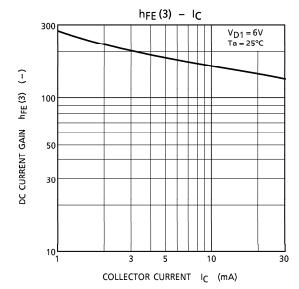


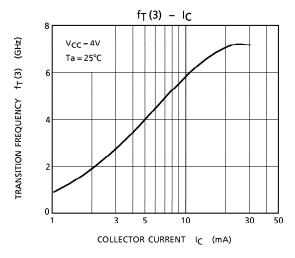






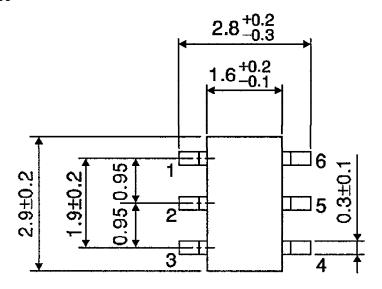


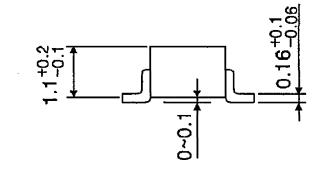




# OUTLINE DRAWING SSOP6-P-0.95

Unit: mm





Weight: 0.013g (Typ.)