

TOSHIBA

TA4100F

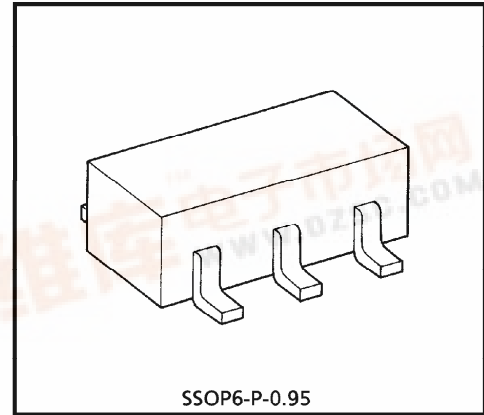
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA4100F

UHF VHF RF, MIX APPLICATION

FEATURES

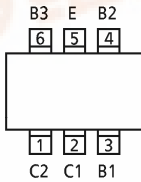
- High f_T . ($f_T = 5\text{GHz}$)
- Differential Circuit is Composed of 3 Transistors.



SSOP6-P-0.95

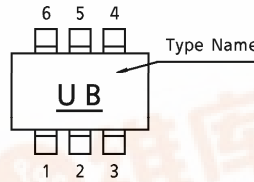
Weight : 0.013g (Typ.)

PIN ASSIGNMENT (TOP VIEW)



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

MARKING



MAXIMUM RATING (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{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	°C
Storage Temperature Range	T_{stg}	-55~125	°C

(*1) Q1, Q2

(*2) Q3

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

961001EBA2

● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

● The products described in this document are subject to foreign exchange and foreign trade control laws.

● The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.

● The information contained herein is subject to change without notice.

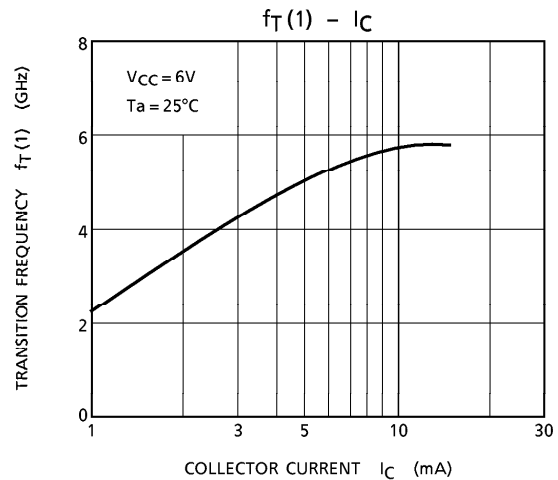
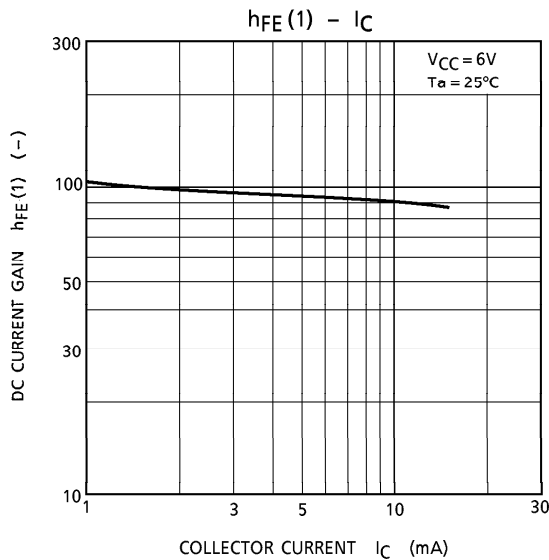
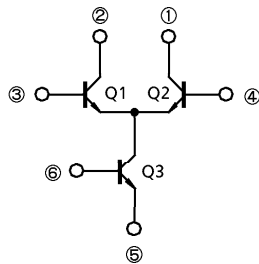


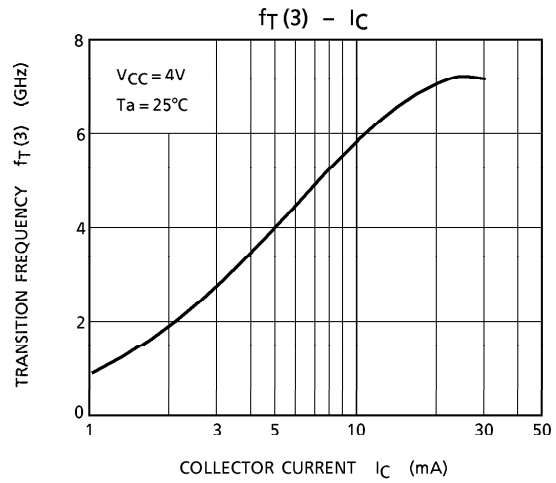
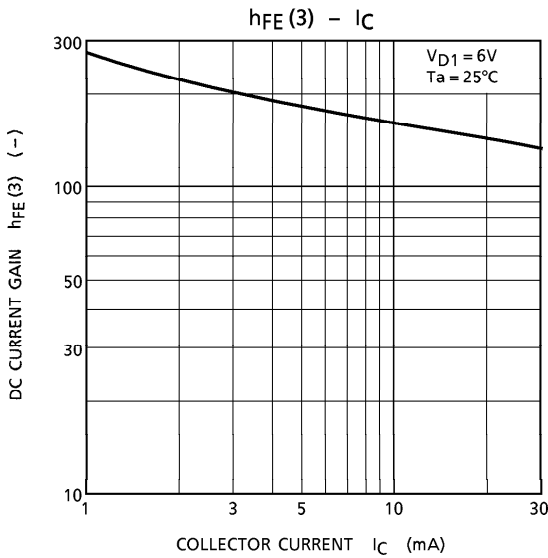
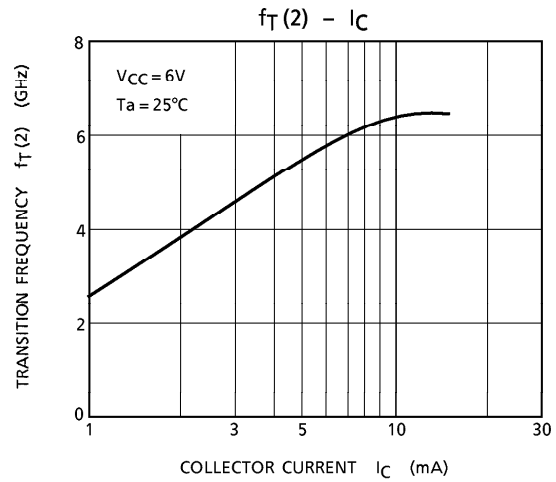
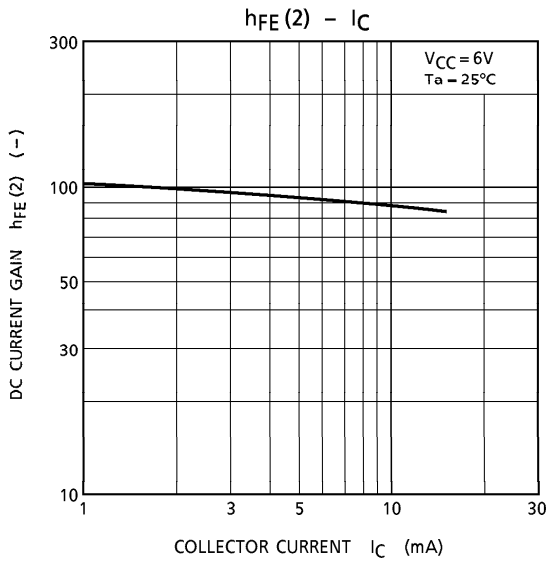
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Voltage	V _{CEO} (1)	—	I _{C1} = 1.0mA, (I _{B3} = 1mA)	5	—	—	V
	V _{CEO} (2)	—	I _{C2} = 1.0mA, (I _{B3} = 1mA)	5	—	—	
	V _{CEO} (3)	—	I _{B1} (I _{C3}) = 1.0mA	5	—	—	
DC Current Gain	h _{FE} (1)	—	V _{C1} = 6V, I _{C1} = 5mA, (I _{B3} = 1mA)	50	100	160	—
	h _{FE} (2)	—	V _{C2} = 6V, I _{C1} = 5mA, (I _{B3} = 1mA)	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} = 6V, I _{C1} = 5mA, (I _{B3} = 1mA)	3.5	5.0	7.0	GHz
	f _T (2)	—	V _{C2} = 6V, I _{C2} = 5mA, (I _{B3} = 1mA)	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

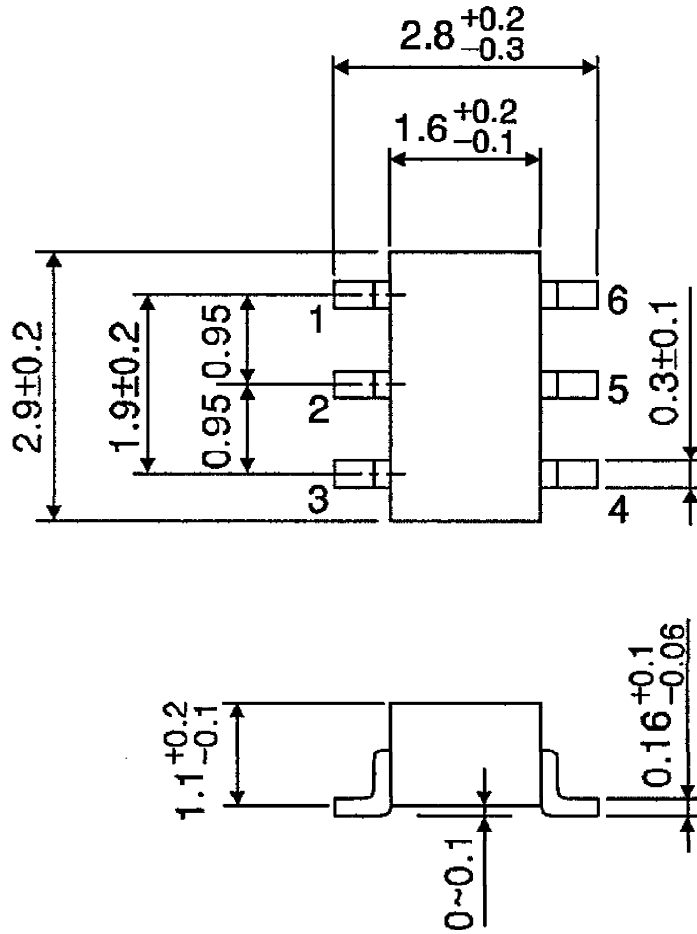
EQUIVALENT CIRCUIT





OUTLINE DRAWING
SSOP6-P-0.95

Unit : mm



Weight : 0.013g (Typ.)