

TENTATIVE

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

# HN3C14FT

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

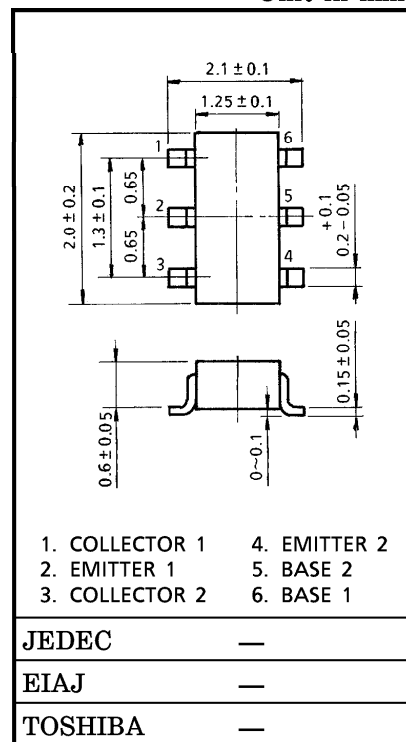
- TWO devices are built in to the super-thin and ultra super mini (6pins) package : TU6

**MOUNTED DEVICES**

	Q1 / Q2
Three-pins (SSM) mold products are corresponded	2SC5111

**MAXIMUM RATINGS (Ta = 25°C)**

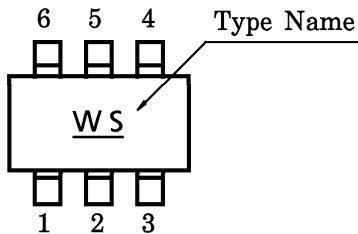
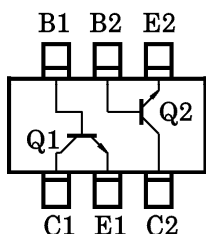
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	20	V
Collector-Emitter Voltage	V <sub>CE0</sub>	10	V
Emitter-Base Voltage	V <sub>EB0</sub>	3	V
Collector Current	I <sub>C</sub>	60	mA
Base Current	I <sub>B</sub>	30	mA
Collector Power Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>j</sub>	125	°C
Storage Temperature Range	T <sub>stg</sub>	-55~125	°C



Weight : 0.008g

**PIN ASSIGNMENT (TOP VIEW)**

**MARKING**



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## ELECTRICAL CHARACTERISTICS (Q1, Q2) (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 10V, I_E = 0$	—	—	1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 1V, I_C = 0$	—	—	1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 5mA$	80	—	240	—
Transition Frequency	$f_T$	$V_{CE} = 5V, I_C = 5mA$	3	5	—	GHz
Insertion Gain	$ S_{21e} ^2$	$V_{CE} = 5V, I_C = 5mA,$ $f = 1000MHz$	6	10	—	dB
Output Capacitance	$C_{ob}$	$V_{CB} = 5V, I_E = 0, f = 1MHz$ (Note)	—	0.9	—	pF
Reverse Transfer Capacitance	$C_{re}$		—	0.7	—	pF
Collector-Base Time Constant	$C_c \cdot r_{bb}'$	$V_{CB} = 5V, I_C = 3mA, f = 30MHz$	—	6	11	ps

(Note)  $C_{re}$  is measured by 3 terminal method capacitance bridge.