TENTATIVE TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

HN2C13FT

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

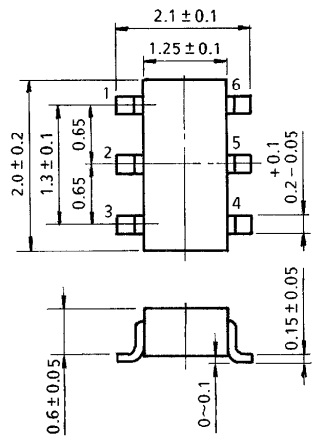
- TWO devices are built in to the super-thin and ultra super mini (6pins) package : TU6

MOUNTED DEVICES

	Q1 / Q2
Three-pins (SSM) mold products are corresponded	2SC5322

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	8	V
Collector-Emitter Voltage	V_{CEO}	5	V
Emitter-Base Voltage	V_{EBO}	1.5	V
Collector Current	I_C	15	mA
Base Current	I_B	7	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	−55~125	°C

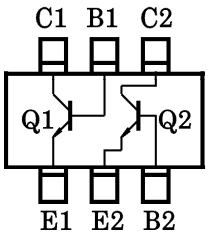


1. EMITTER 1
2. EMITTER 2
3. BASE 2
4. COLLECTOR 2
5. BASE 1
6. COLLECTOR 1

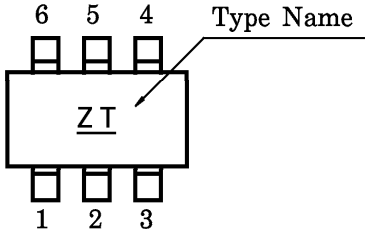
JEDEC	—
EIAJ	—
TOSHIBA	—

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	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 1V, I_C = 0	—	—	1	μA
DC Current Gain	h_{FE}	V_{CE} = 3V, I_C = 7mA	50	—	250	—
Transition Frequency	f_T	V_{CE} = 3V, I_C = 7mA	13	16	—	GHz
Insertion Gain	$\|S_{21e}\|^2$ (1)	V_{CE} = 3V, I_C = 7mA, f = 1000MHz	—	15.5	—	dB
	$\|S_{21e}\|^2$ (2)	V_{CE} = 3V, I_C = 7mA, f = 2000MHz	7	10	—	
Noise Figure	NF (1)	V_{CE} = 3V, I_C = 3mA, f = 1000MHz	—	0.9	—	dB
	NF (2)	V_{CE} = 3V, I_C = 3mA, f = 2000MHz	—	1.4	2.2	
Output Capacitance	C_{ob}	V_{CB} = 2.5V, I_E = 0, f = 1MHz (Note)	—	0.4	0.9	pF
Reverse Transfer Capacitance	C_{re}		—	0.3	0.8	

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