

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

HN3C10FU

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

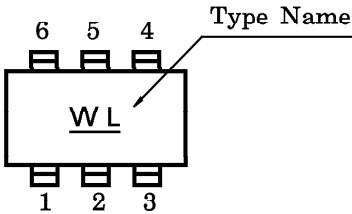
- Including Two Devices in US6 (Ultra Super Mini Type with 6 Leads)

MAXIMUM RATINGS (Ta = 25°C)

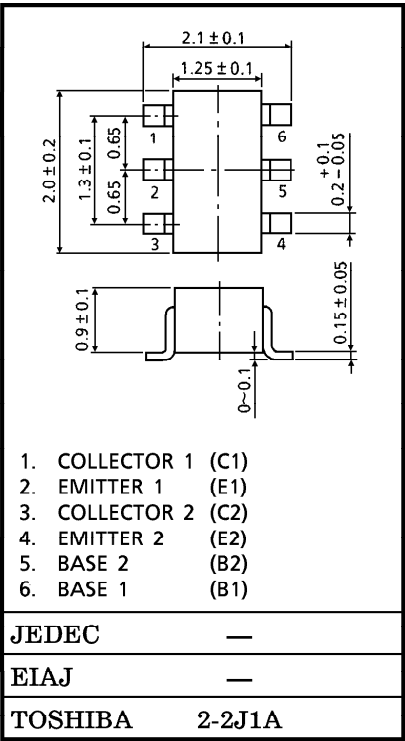
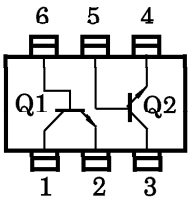
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	VCBO	20	V
Collector-Emitter Voltage	VCEO	12	V
Emitter-Base Voltage	VEBO	3	V
Collector Current	IC	80	mA
Base Current	IB	40	mA
Collector Power Dissipation	PC*	200	mW
Junction Temperature	Tj	125	°C
Storage Temperature Range	Tstg	-55~125	°C

\* : Total

MARKING



PIN ASSIGNMENT (TOP VIEW)



ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	ICBO	VCB=10V, IE=0	—	—	1	μA
Emitter Cut-off Current	IEBO	VEB=1V, IC=0	—	—	1	μA
DC Current Gain	hFE	VCE=10V, IC=20mA	80	—	240	—
Transition Frequency	fT	VCE=10V, IC=20mA	5	7	—	GHz
Insertion Gain	S21e  <sup>2</sup>	VCE=10V, IC=20mA, f=1GHz	8	11.5	—	dB
Noise Figure	NF	VCE=10V, IC=5mA, f=1GHz	—	1.1	2	dB
Reverse Transfer Capacitance Q1	Cre	VCB=10V, IE=0, f=1MHz (Note)	—	0.7	1.2	pF
Reverse Transfer Capacitance Q2	Cre		—	0.65	1.15	pF

(Note) Cre is measured by 3 terminal method capacitance bridge.

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