

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

HN3C10F

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

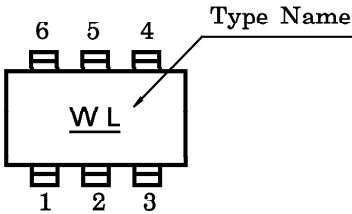
- Including Two Devices in SM6 (Super Mini Type with 6 Leads)

MAXIMUM RATINGS (Ta = 25°C)

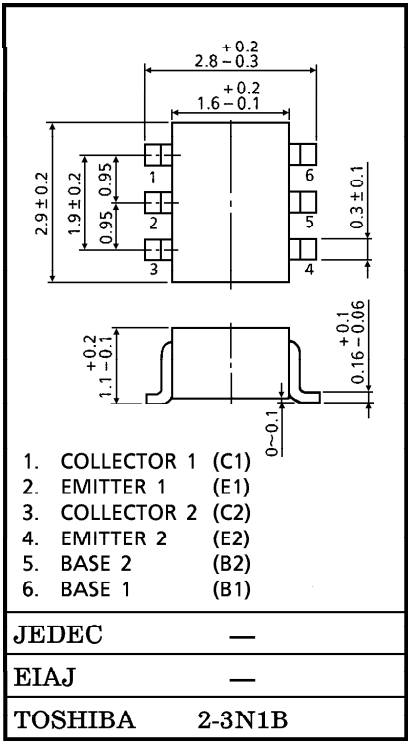
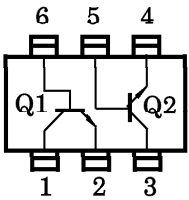
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	20	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter-Base Voltage	V_{EB0}	3	V
Base Current	I_B	40	mA
Collector Current	I_C	80	mA
Collector Power Dissipation	P_{C^*}	300	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	-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	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}	$V_{CE} = 10V, I_C = 20mA$	80	—	240	—
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 20mA$	5	7	—	GHz
Insertion Gain	$ S_{21e} ^2$	$V_{CE} = 10V, I_C = 20mA, f = 1GHz$	8	11.5	—	dB
Noise Figure	NF	$V_{CE} = 10V, I_C = 5mA, f = 1GHz$	—	1.1	2	dB
Reverse Transfer Capacitance Q1	C_{re}	$V_{CB} = 10V, I_E = 0, f = 1MHz$ (Note)	—	0.7	1.2	pF
Reverse Transfer Capacitance Q2	C_{re}		—	0.65	1.15	pF

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

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