

TOSHIBA TRANSISTOR SILOCON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2459

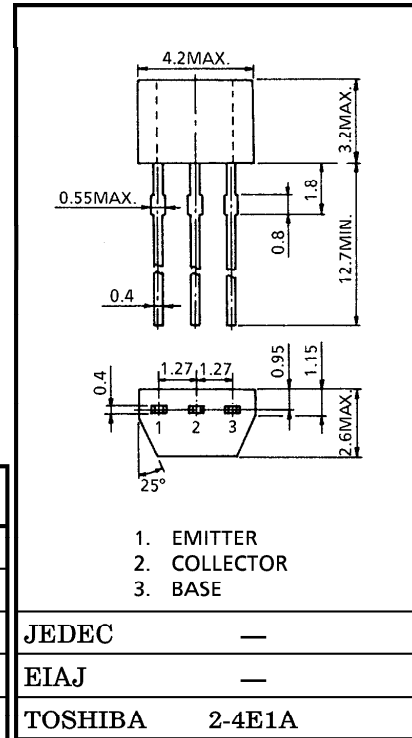
AUDIO AMPLIFIER APPLICATIONS

Unit in mm

- High Breakdown Voltage : $V_{CEO} = 120V$ (Min.)
- High DC Current Gain : $h_{FE} = 200 \sim 700$
- Excellent h_{FE} Linearity
: $h_{FE}(I_C = 0.1mA) / h_{FE}(I_C = 2mA) = 0.95$ (Typ.)
- Low Noise : $NF = 1dB$ (Typ.), $10dB$ (Max.)
- Complementary to 2SA1049.
- Small Package.

MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	120	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Base Current	I_B	20	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature Range	T_{stg}	-55~125	$^\circ C$



Weight : 0.13g

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 120V, I_E = 0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	0.1	μA
DC Current Gain	h_{FE} (Note)	$V_{CE} = 6V, I_C = 2mA$	200	—	700	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$	—	—	0.3	V
Transition Frequency	f_T	$V_{CE} = 6V, I_C = 1mA$	—	100	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	3.0	—	pF
Noise Figure	NF	$V_{CE} = 6V, I_C = 0.1mA, f = 1kHz, R_G = 10k\Omega$	—	1.0	10	dB

Note : h_{FE} Classification GR : 200~400, BL : 350~700

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