

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

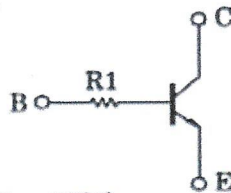
RN1241, RN1242, RN1243, RN1244

Unit in mm

FOR MUTING AND SWITCHING APPLICATIONS

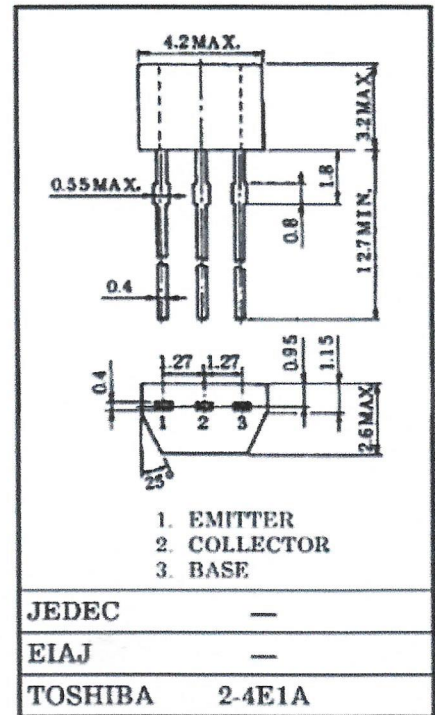
- High Emitter-Base Voltage : $V_{EBO} = 25V$ (Min.)
- High Reverse h_{FE}
: Reverse $h_{FE} = 150$ (Typ.) ($V_{CE} = -2V, I_C = -4mA$)
- Low On Resistance : $R_{ON} = 1\Omega$ (Typ.) ($I_B = 5mA$)
- With Built-in Bias Resistors
- Simplify Circuit Design
- Reduce a Quantity of Parts and Manufacturing Process

EQUIVALENT CIRCUIT



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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	25	V
Collector Current	I_C	300	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55~150	$^\circ C$



JEDEC	-
EIAJ	-
TOSHIBA	2-4E1A

Weight : 0.13g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 50V, I_E = 0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 25V, I_C = 0$	-	-	0.1	μA
DC Current Gain	$h_{FE}(\text{Note})$	$V_{CE} = 2V, I_C = 4mA$	200	-	1200	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 30mA, I_B = 3mA$	-	-	0.1	V
Transition Frequency	f_T	$V_{CE} = 6V, I_C = 4mA$	-	30	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	4.8	-	pF
Input Resistor	RN1241	R1	3.9	5.6	7.3	k Ω
	RN1242		7	10	13	
	RN1243		15.4	22	28.6	
	RN1244		1.54	2.2	2.86	

Note : h_{FE} Classification A : 200~700 B : 350~1200

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