

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

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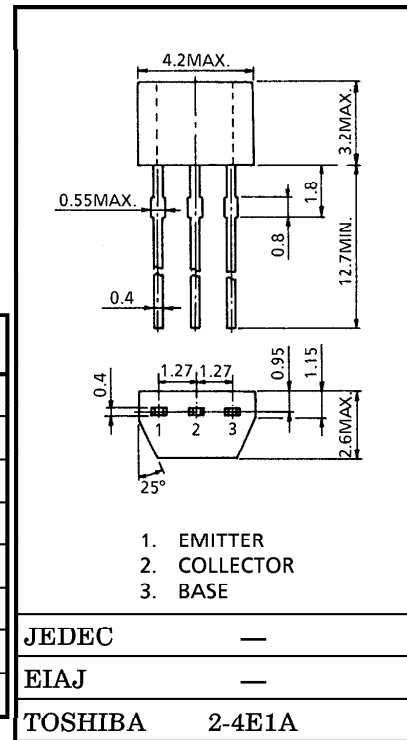
FOR MUTING AND SWITCHING APPLICATIONS

Unit in mm

- High Emitter-Base Voltage : $V_{EBO}=25V$ (Min.)
- High Reverse h_{FE} : $h_{FE}=150$ (Typ.) ($V_{CE} = -2V$, $I_C = -4mA$)
- Low On Resistance : $R_{ON}=1\Omega$ (Typ.) ($I_B=5mA$)
- Small Package

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

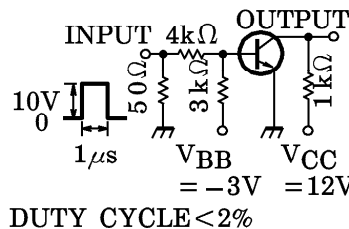
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	25	V
Collector Current	I_C	300	mA
Base Current	I_B	60	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature Range	T_{stg}	-55~125	$^\circ C$



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

Weight : 0.13g

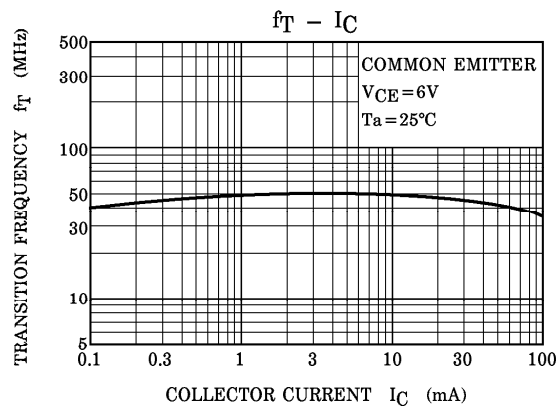
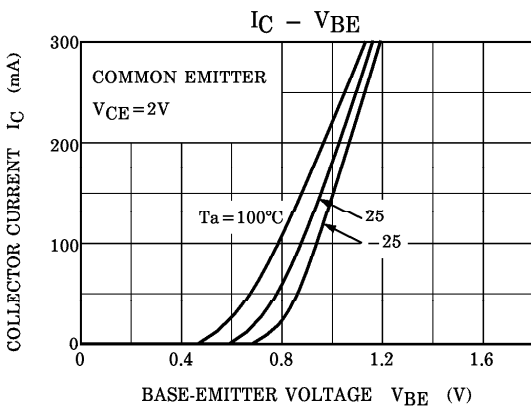
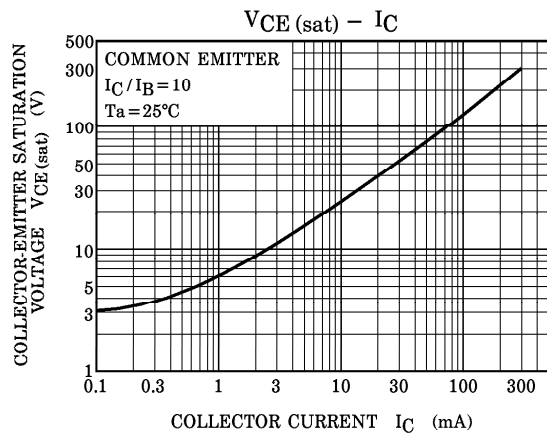
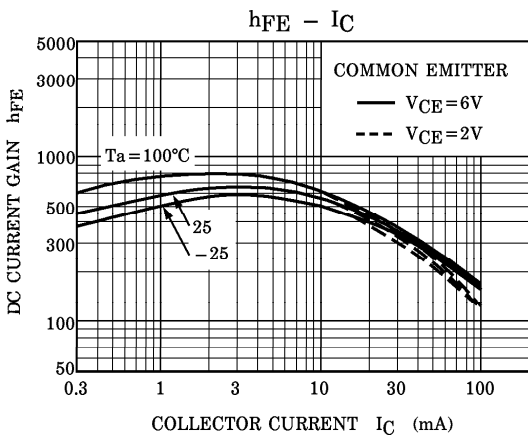
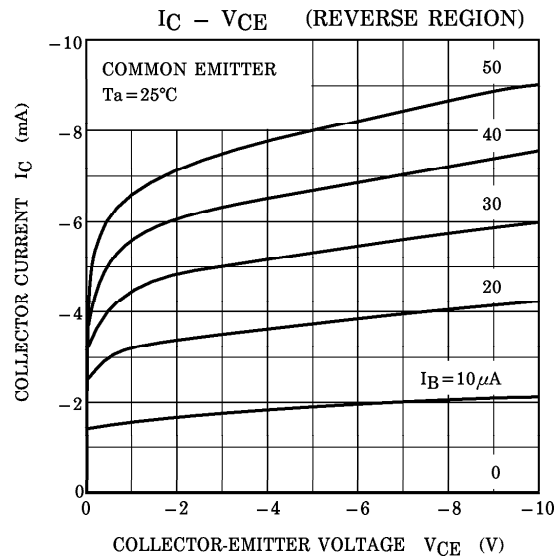
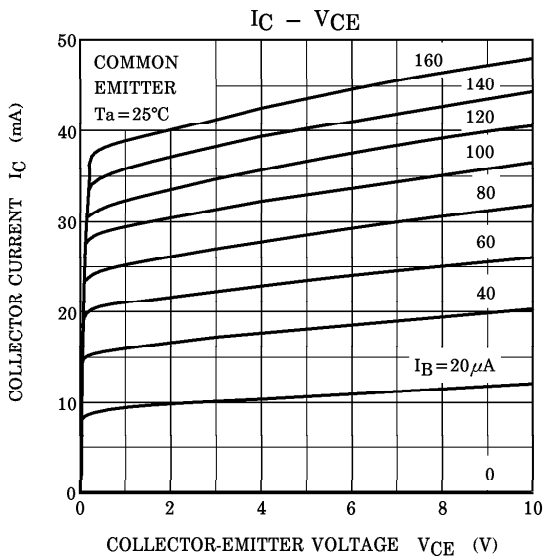
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$	—	—	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=25V, I_C=0$	—	—	0.1	μA
DC Current Gain	h_{FE} (Note)	$V_{CE}=2V, I_C=4mA$	200	—	1200	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=30mA, I_B=3mA$	—	0.042	0.1	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=2V, I_C=4mA$	—	0.61	—	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	7	pF
Switching Time	Turn-on Time	t_{on}	—	160	—	ns
	Storage Time	t_{stg}	—	500	—	
	Fall Time	t_f	—	130	—	



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

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