

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC3225

SWITCHING APPLICATIONS.

SOLENOID DRIVE APPLICATIONS.

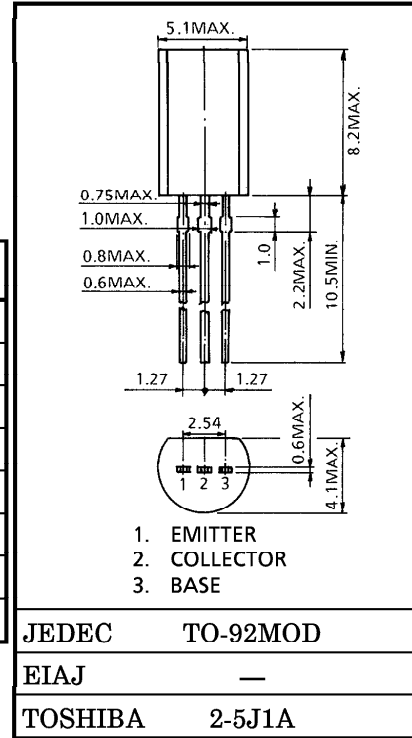
INDUSTRIAL APPLICATIONS

Unit in mm

- High DC Current Gain : $h_{FE} = 500$ (Min.) ($I_C = 400\text{mA}$)
- Low Saturation Voltage : $V_{CE(sat)} = 0.5\text{V}$ (Max.) ($I_C = 300\text{mA}$)

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

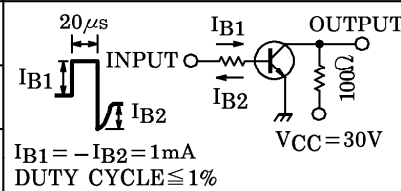
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current	I_C	2	A
Base Current	I_B	0.5	A
Collector Power Dissipation	P_C	900	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



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

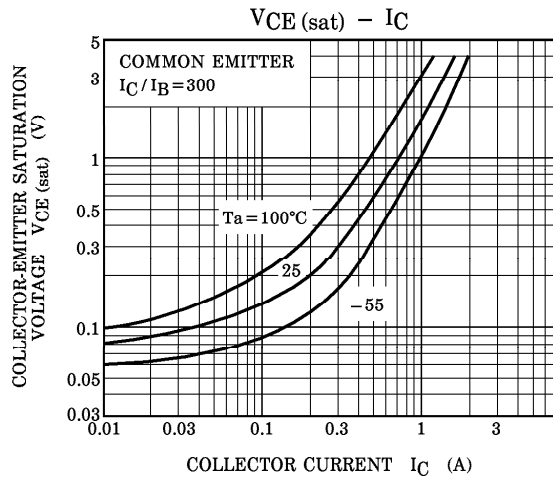
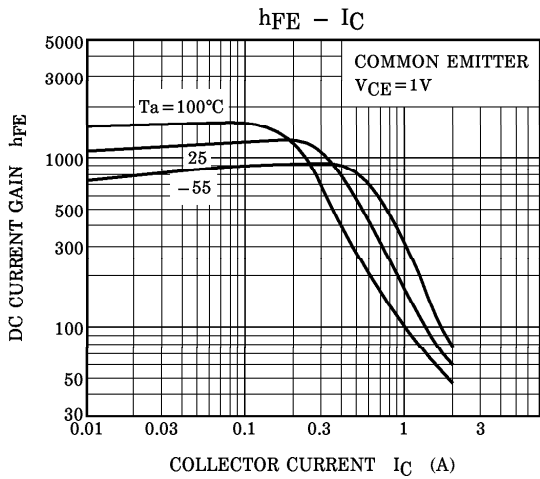
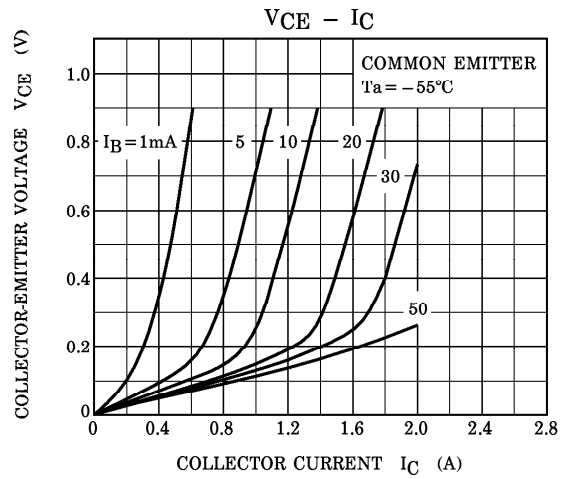
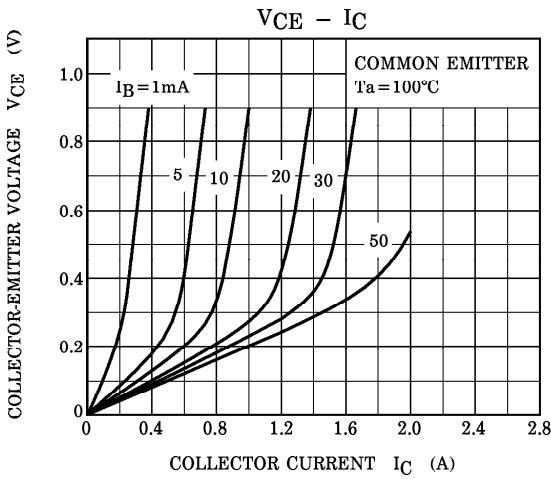
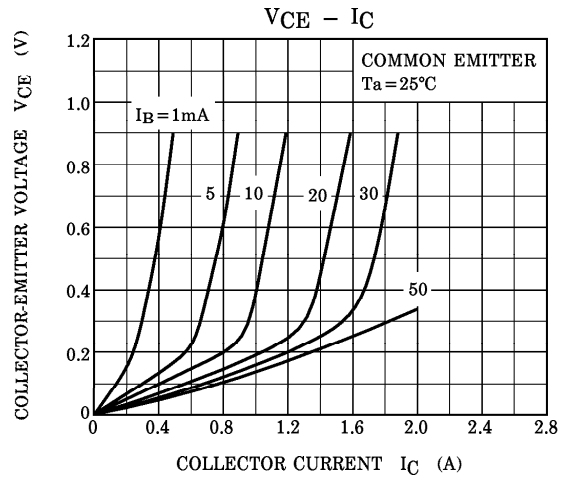
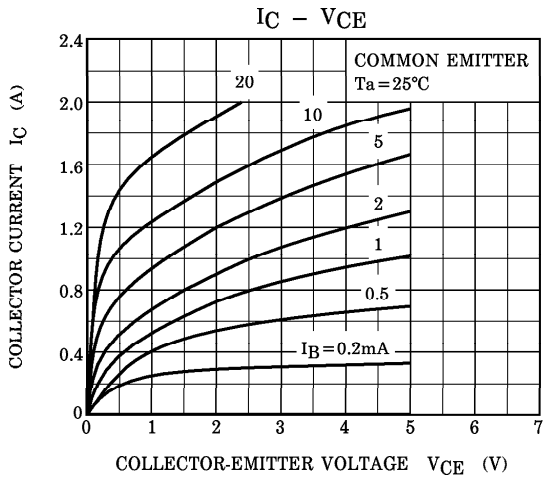
Weight : 0.36g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	—	—	100	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 7\text{V}, I_C = 0$	—	—	1	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	40	—	—	V
DC Current Gain	h_{FE}	$V_{CE} = 1\text{V}, I_C = 400\text{mA}$	500	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 300\text{mA}, I_B = 1\text{mA}$	—	0.3	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 300\text{mA}, I_B = 1\text{mA}$	—	—	1.1	V
Transition Frequency	f_T	$V_{CE} = 2\text{V}, I_C = 100\text{mA}$	—	220	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	—	20	—	pF
Switching Time	Trun-On Time	t_{on}	—	1.0	—	μs
	Storage Time	t_{stg}	—	3.0	—	
	Fall Time	t_f	—	1.2	—	



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