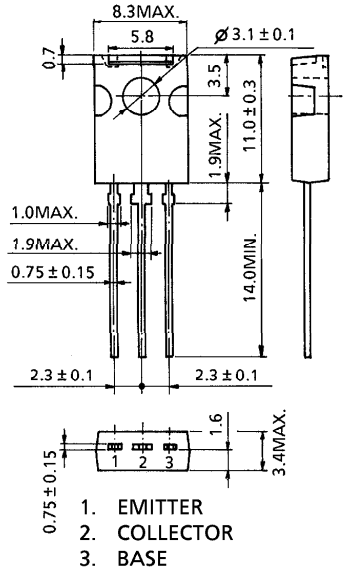
TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE

2SC5550

HIGH SPEED SWITCHING APPLICATION FOR INVERTER LIGHTING SYSTEM

- Suitable for R_{CC} Circuit. (Guaranteed small current h_{FE})
  : $h_{FE}=13$ (Min.) ($I_C=1mA$)
- High Speed : $t_r=0.5\mu s$ (Max.), $t_f=0.3\mu s$ (Max.) ($I_C=0.24A$)
- High Voltage : $V_{CEO}=400V$

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-8H1A

Weight : 0.82g

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	400	V
Collector-Emitter Voltage		V_{CEO}	400	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	1	A
	Pulse	I_{CP}	2	
Base Current		I_B	0.5	A
Collector Power Dissipation	Ta=25°C	P_C	1.5	W
	Tc=25°C		10	
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

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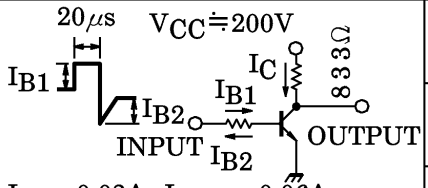
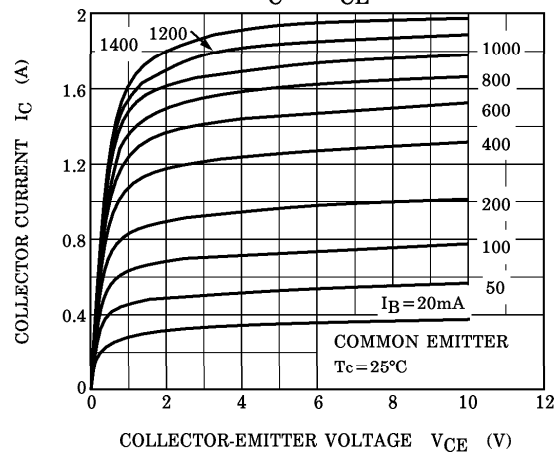
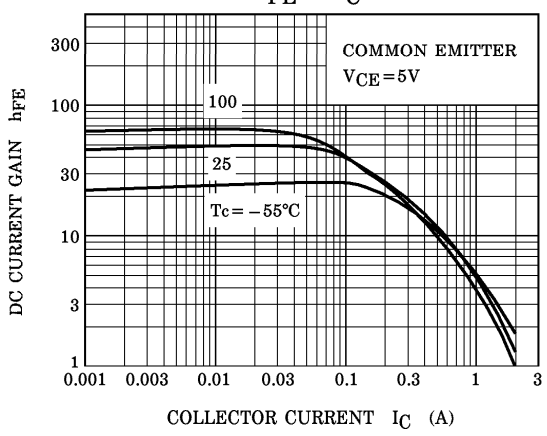
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB} = 320V, I_E = 0	—	—	100	μA
Emitter Cut-off Current		I_{EBO}	V_{EB} = 7V, I_C = 0	—	—	100	μA
Collector-Base Breakdown Voltage		$V_{(BR)\,CBO}$	I_C = 1mA, I_B = 0	400	—	—	V
Collector-Emitter Breakdown Voltage		$V_{(BR)\,CEO}$	I_C = 10mA, I_B = 0	400	—	—	V
DC Current Gain		h_{FE} (1)	V_{CE} = 5V, I_C = 1mA	13	—	—	
		h_{FE} (2)	V_{CE} = 5V, I_C = 0.04A	20	—	65	
Collector-Emitter Saturation Voltage		$V_{CE\,(sat)}$	I_C = 0.2A, I_B = 25mA	—	—	1.0	V
Base-Emitter Saturation Voltage		$V_{BE\,(sat)}$	I_C = 0.2A, I_B = 25mA	—	—	1.3	V
Switching Time	Rise Time	t_r	 I_{B1} = 0.03A, I_{B2} = −0.06A DUTY CYCLE ≦ 1%	—	—	0.5	μs
	Storage Time	t_{stg}		—	—	5.0	
	Fall Time	t_f		—	—	0.3	

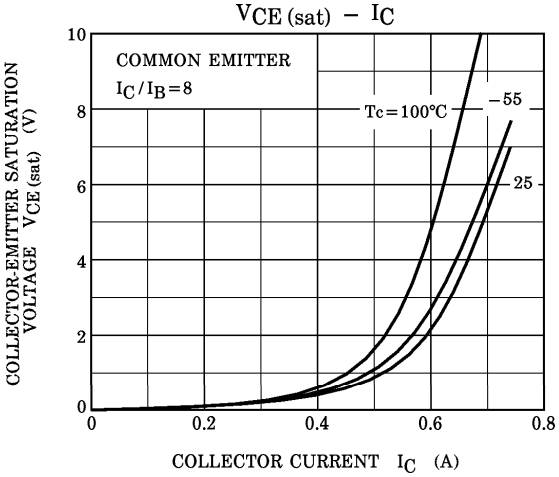
$I_C - V_{CE}$



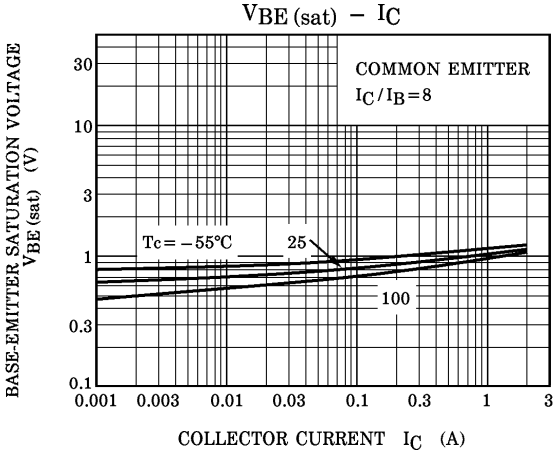
$h_{FE} - I_C$



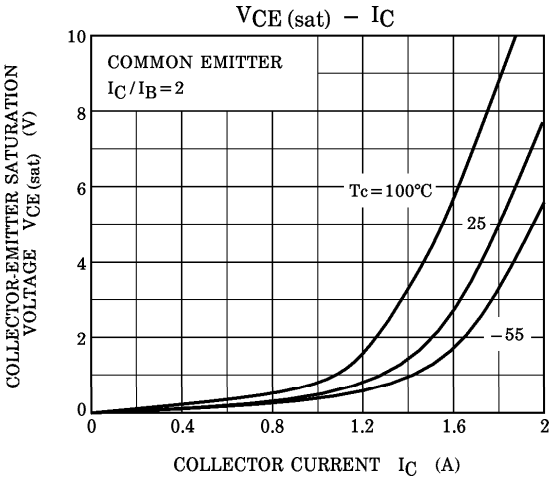
$V_{CE\,(sat)} - I_C$



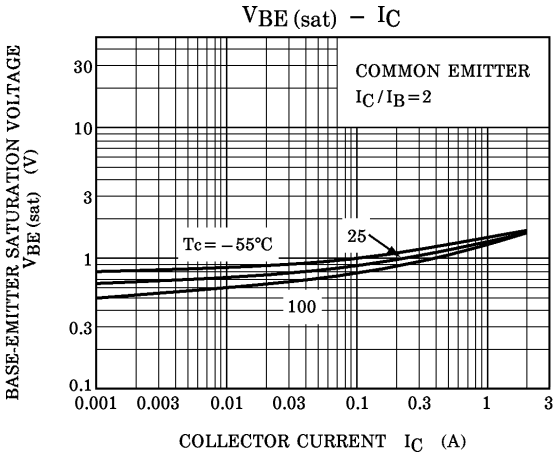
$V_{BE\,(sat)} - I_C$



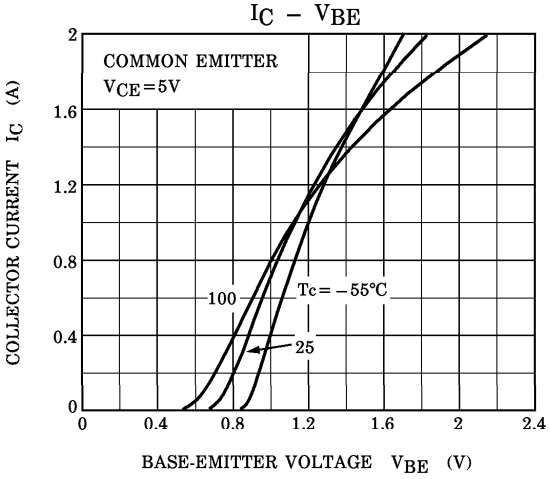
$V_{CE\,(sat)} - I_C$



$V_{BE\,(sat)} - I_C$



$I_C - V_{BE}$



SAFE OPERATING AREA