

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

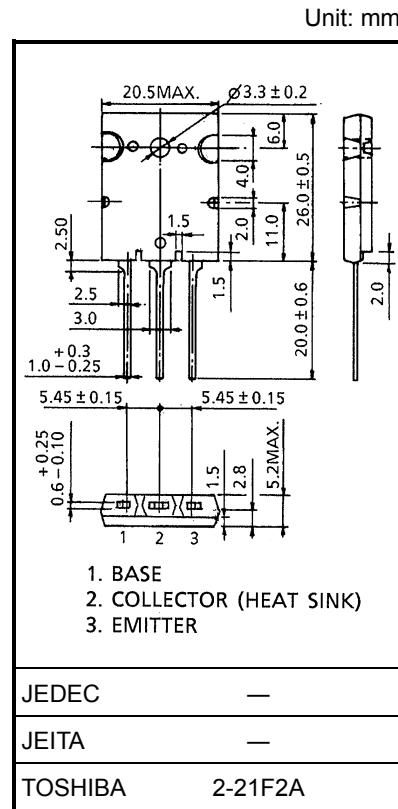
2SC5590

HORIZONTAL DEFLECTION OUTPUT FOR SUPER
 HIGH RESOLUTION DISPLAY, COLOR TV FOR
 MULTI-MEDIA & HDTV
 HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CBO} = 1700$ V
- Low Saturation Voltage : $V_{CE}(\text{sat}) = 3$ V (Max.)
- High Speed : $t_f(2) = 0.1\mu\text{s}$ (Typ.)

MAXIMUM RATINGS (T_c = 25°C)

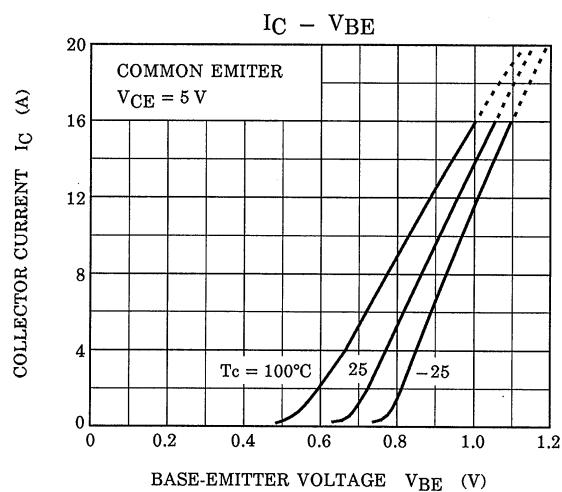
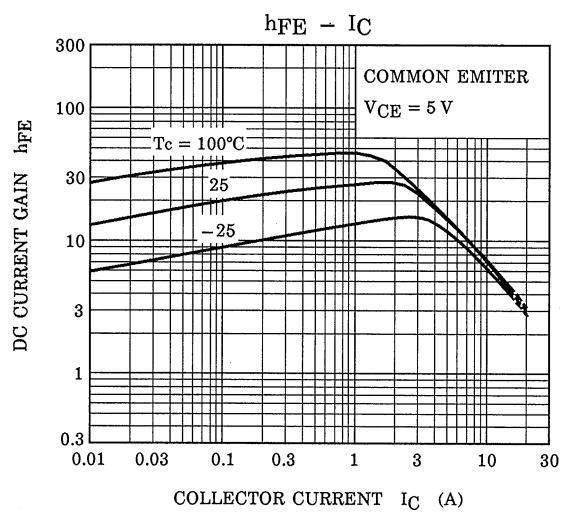
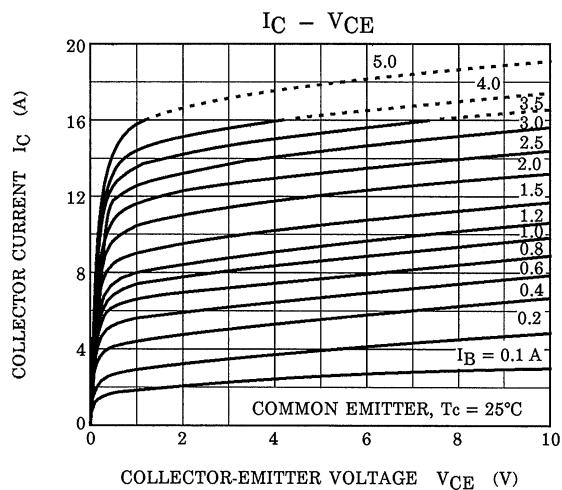
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	1700	V
Collector-Emitter Voltage	V_{CEO}	800	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	16
	Pulse	I_{CP}	32
Base Current	I_B	8	A
Collector Power Dissipation	P_C	200	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

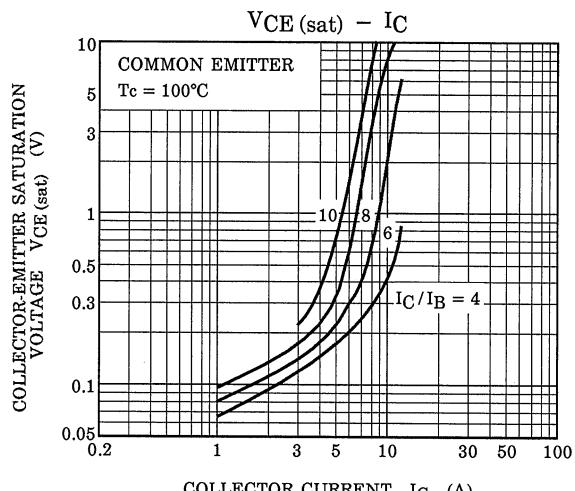
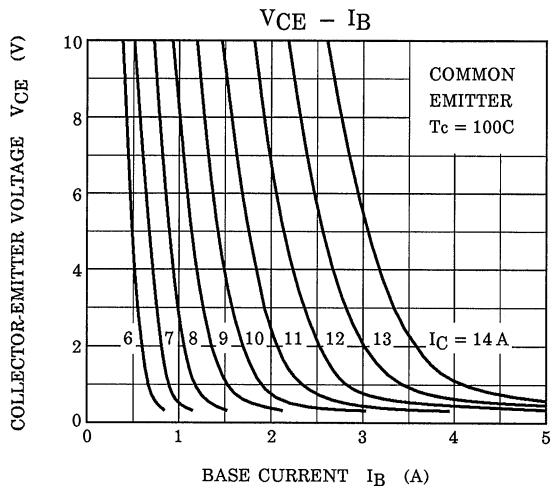
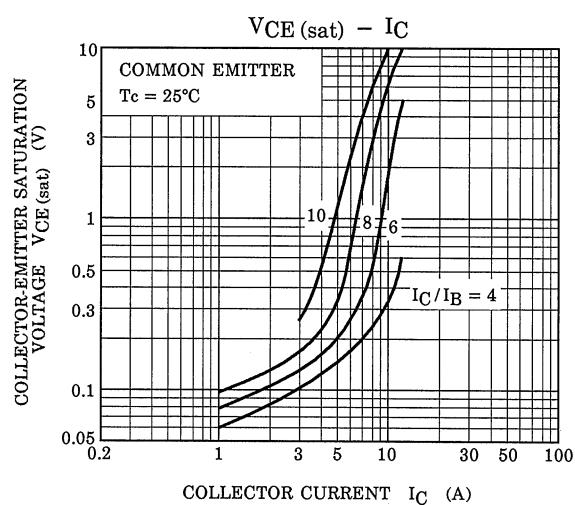
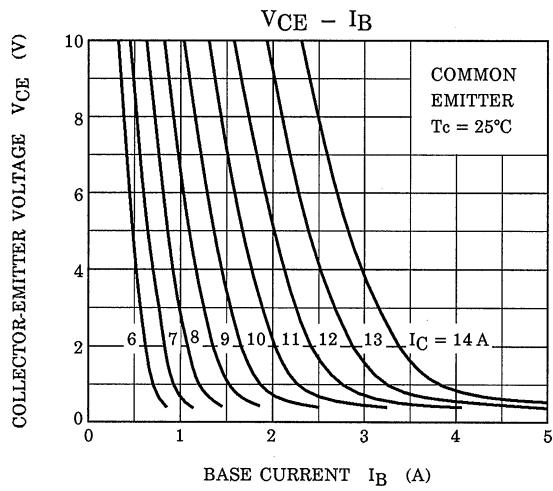
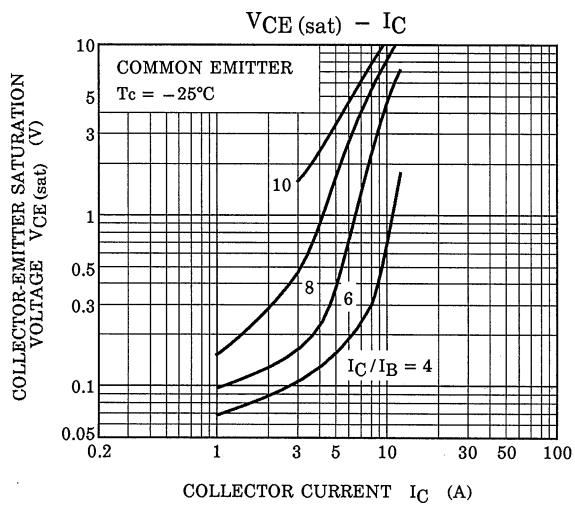
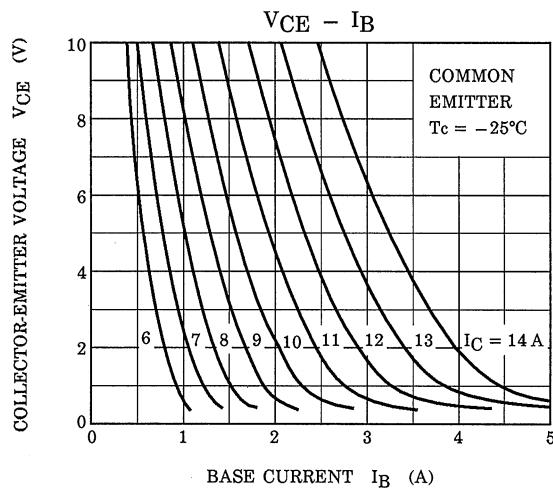


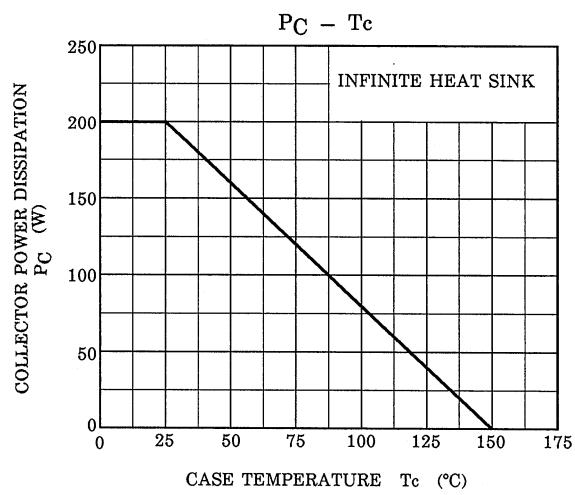
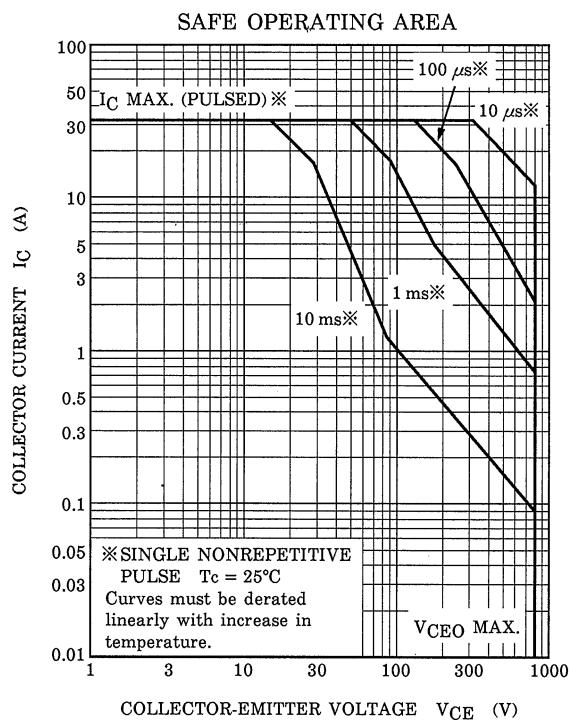
Weight: 9.75 g (typ.)

ELECTRICAL CHARACTERISTICS (T_c = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 1700$ V, $I_E = 0$	—	—	1	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5$ V, $I_C = 0$	—	—	100	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10$ mA, $I_B = 0$	800	—	—	V
DC Current Gain	$h_{FE}(1)$	$V_{CE} = 5$ V, $I_C = 2$ A	22	—	45	—
	$h_{FE}(2)$	$V_{CE} = 5$ V, $I_C = 9$ A	6.5	—	12	
	$h_{FE}(3)$	$V_{CE} = 5$ V, $I_C = 12$ A	4.8	—	8	
Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C = 12$ A, $I_B = 3$ A	—	—	3	V
Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C = 12$ A, $I_B = 3$ A	—	1.0	1.5	V
Transition Frequency	f_T	$V_{CE} = 10$ V, $I_C = 0.1$ A	—	2	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10$ V, $I_E = 0$, $f = 1$ MHz	—	240	—	pF
Switching Time	Storage Time	$t_{stg}(1)$	$I_{CP} = 9$ A, I_{B1} (end) = 1.1 A $f_H = 32$ kHz	—	3.5	4
	Fall Time	$t_f(1)$		—	0.25	0.35
	Storage Time	$t_{stg}(2)$	$I_{CP} = 6.5$ A, I_{B1} (end) = 1A $f_H = 100$ kHz	—	1.8	2
	Fall Time	$t_f(2)$		—	0.1	0.15







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