

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5612

HORIZONTAL DEFLECTION OUTPUT FOR COLOR TV

Unit: mm

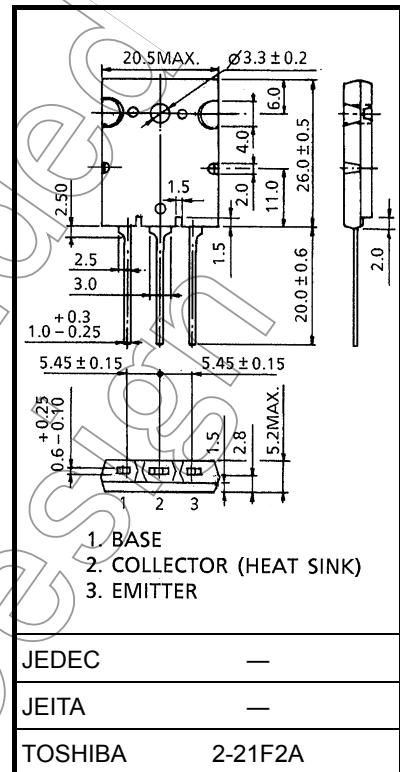
- High Voltage : $V_{CBO} = 2000$ V
- Low Saturation Voltage : $V_{CE}(\text{sat}) = 3$ V (Max.)
- High Speed : $t_f = 0.15\mu\text{s}$ (Typ.)

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	2000	V
Collector-Emitter Voltage	V_{CEO}	900	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	22
	Pulse	I_{CP}	44
Base Current	I_B	11	A
Collector Power Dissipation	P_C	220	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



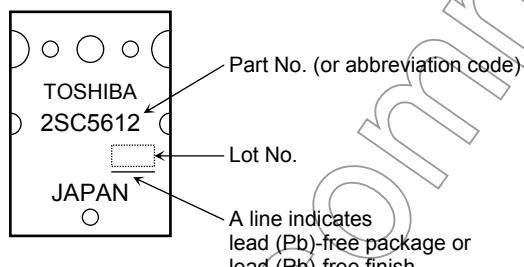
Weight: 9.75 g (typ.)

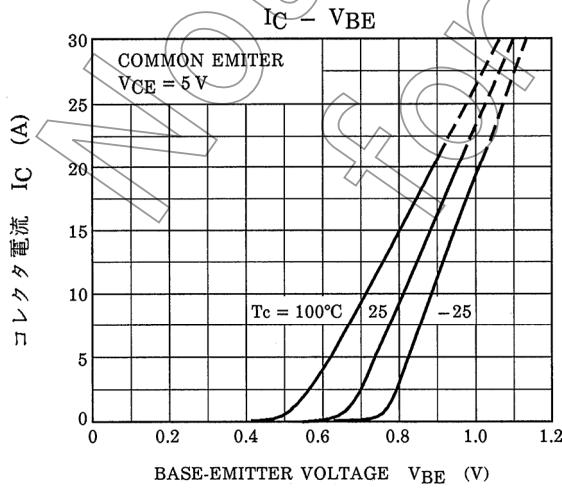
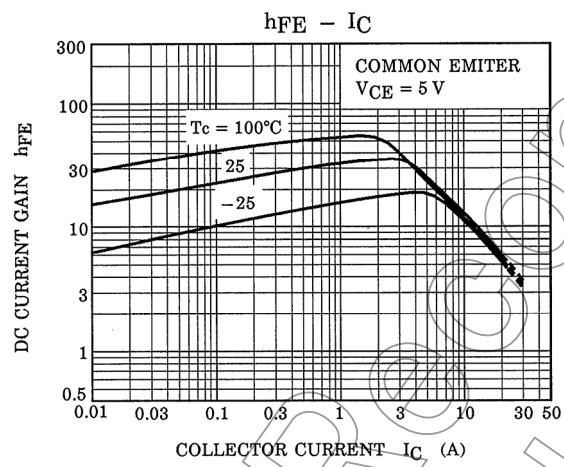
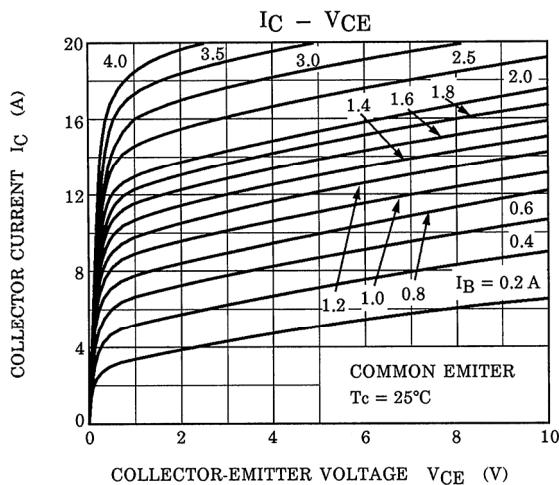
JEDEC —
JEITA —
TOSHIBA 2-21F2A

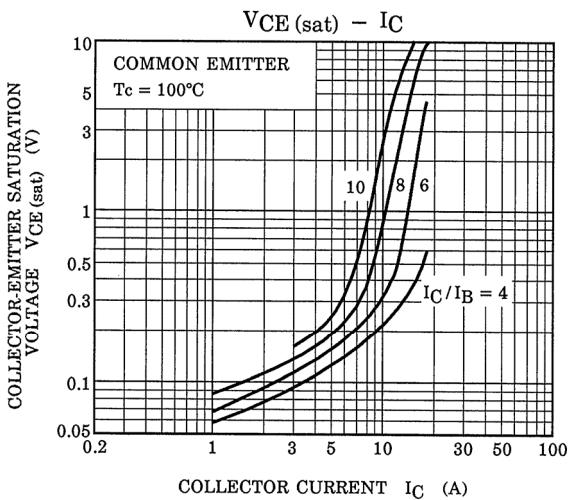
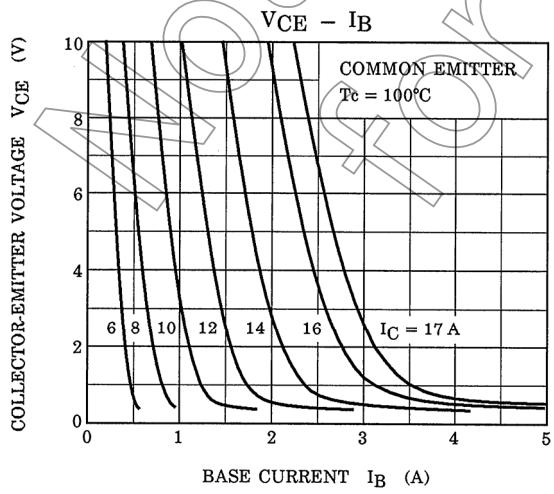
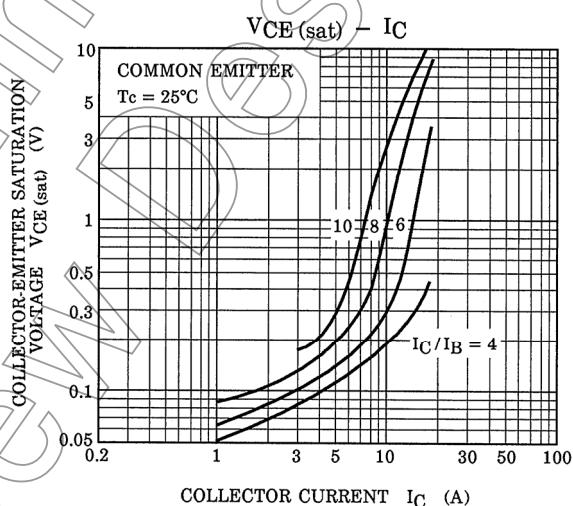
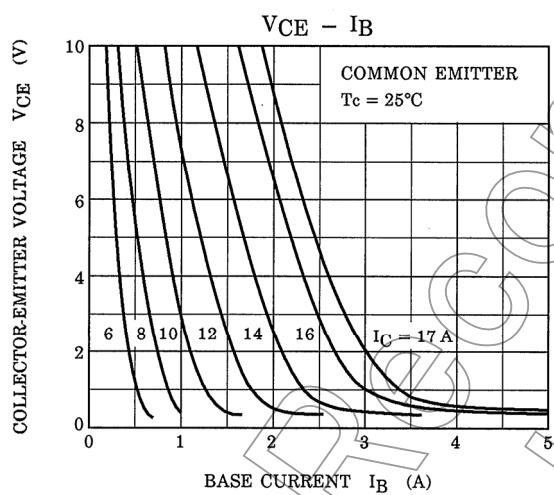
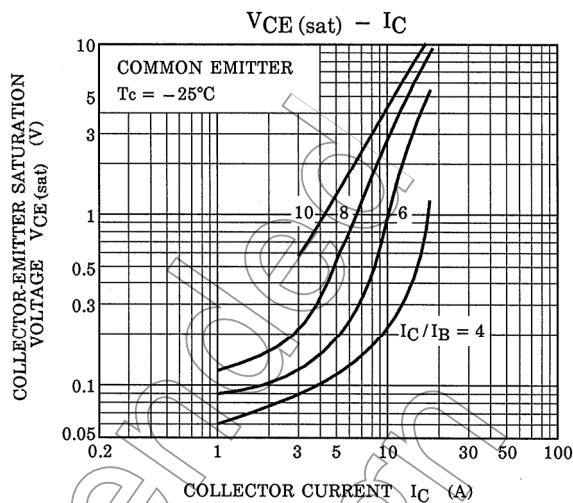
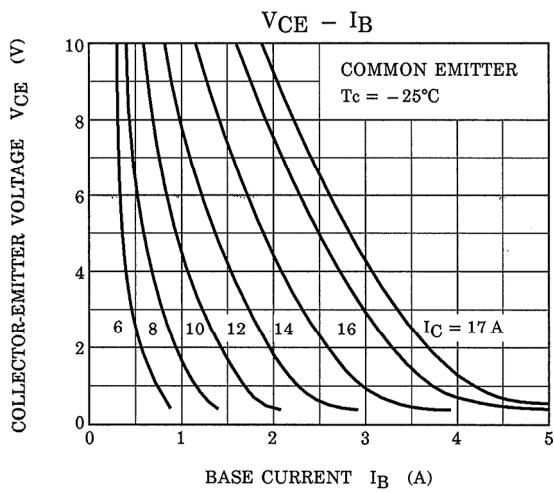
ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

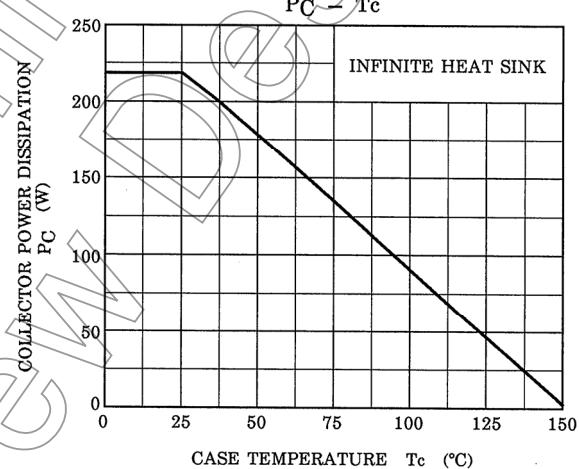
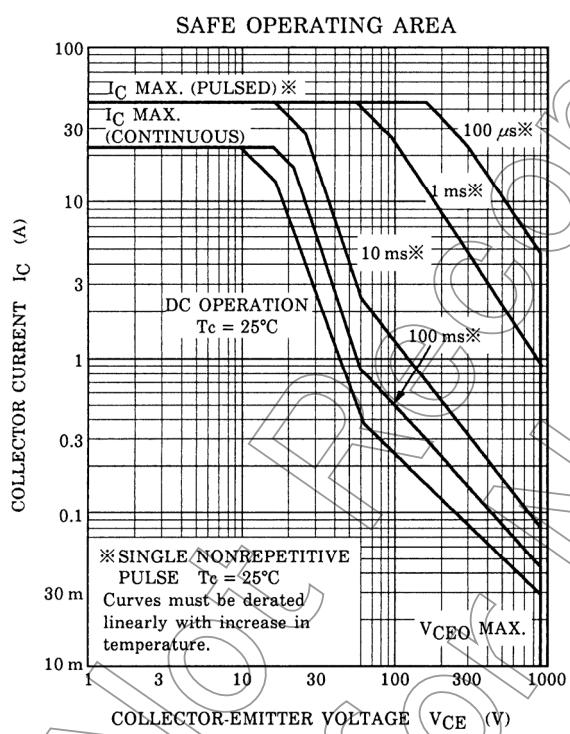
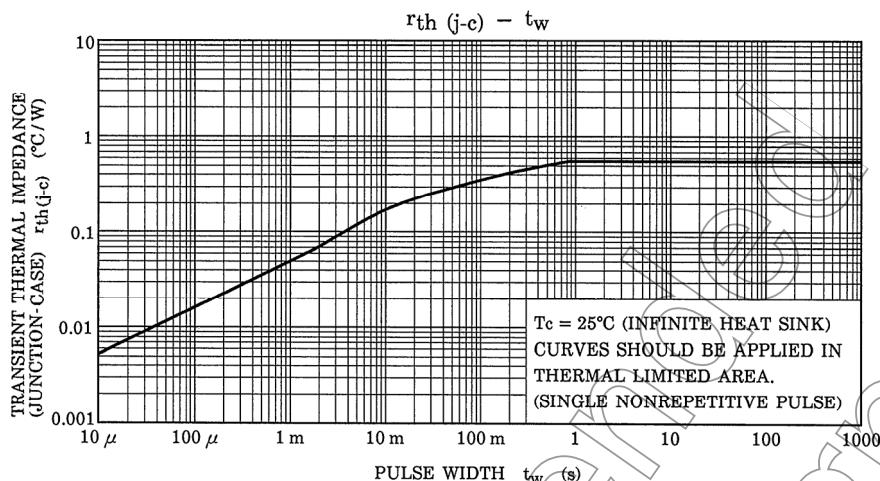
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT	
Collector Cut-off Current	I_{CBO}	$V_{CB} = 2000\text{ V}, I_E = 0$	—	—	1	mA	
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$	—	—	100	μA	
Collector-Emitter Breakdown Voltage	$V_{(\text{BR})\text{CEO}}$	$I_C = 10\text{ mA}, I_B = 0$	900	—	—	V	
DC Current Gain	h_{FE} (1)	$V_{CE} = 5\text{ V}, I_C = 2\text{ A}$	15	—	50	—	
	h_{FE} (2)	$V_{CE} = 5\text{ V}, I_C = 9\text{ A}$	9.5	—	18.5		
	h_{FE} (3)	$V_{CE} = 5\text{ V}, I_C = 17\text{ A}$	4.8	—	9.0		
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$	$I_C = 17\text{ A}, I_B = 4.25\text{ A}$	—	—	3	V	
Base-Emitter Saturation Voltage	$V_{BE(\text{sat})}$	$I_C = 17\text{ A}, I_B = 4.25\text{ A}$	—	—	1.3	V	
Transition Frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 0.1\text{ A}$	—	2	—	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	470	—	pF	
Switching Time	Storage Time	t_{stg}	$I_{CP} = 8\text{ A}, I_{B1(\text{end})} = 1\text{ A}$ $f_H = 32\text{ kHz}$	—	4.0	5.0	μs
	Fall Time	t_f		—	0.15	0.35	

MARKING









RESTRICTIONS ON PRODUCT USE

20070701-EN

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