

TOSHIBA Transistor Silicon NPN Triple Diffused Mesa Type

# 2SC5748

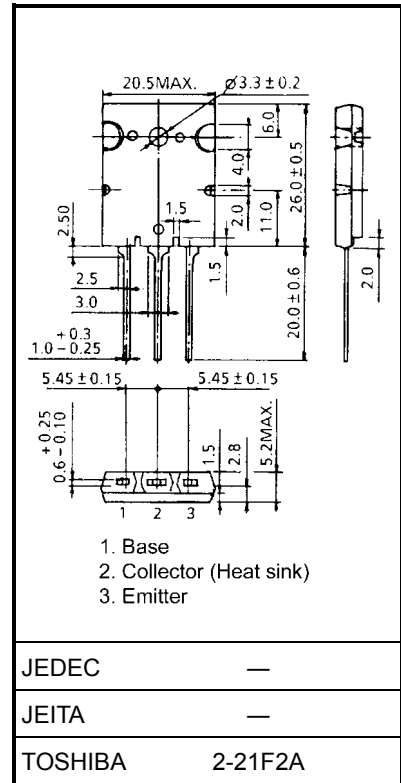
Horizontal Deflection Output for HDTV&Digital TV.

Unit: mm

- High voltage:  $V_{CBO} = 2000\text{ V}$
- Low saturation voltage:  $V_{CE(sat)} = 3\text{ V (max)}$
- High speed:  $t_f = 0.15\ \mu\text{s (typ.)}$

## Maximum Ratings (Tc = 25°C)

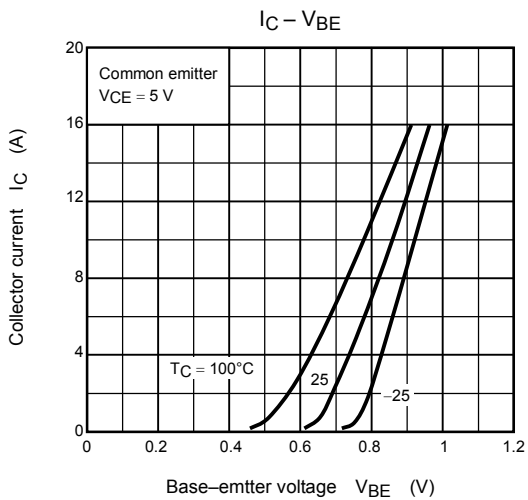
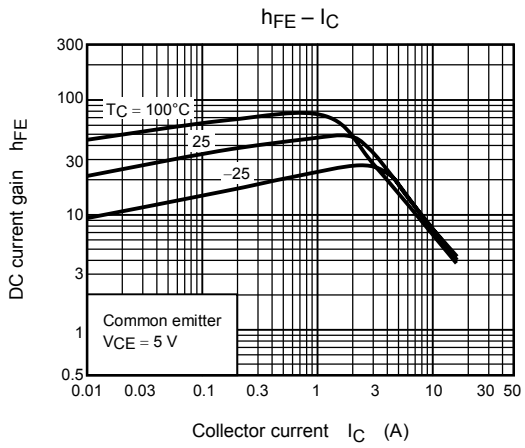
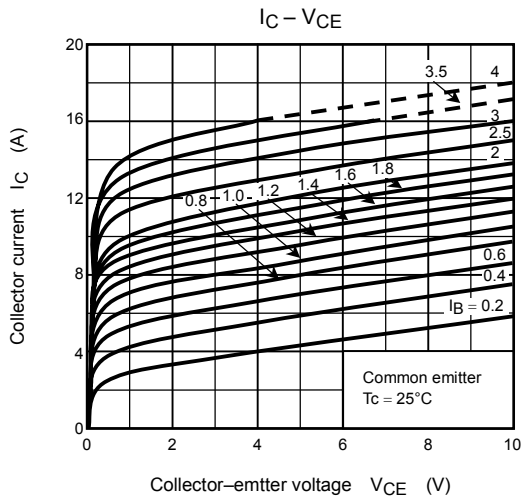
Characteristics		Symbol	Rating	Unit
Collector-base voltage		$V_{CBO}$	2000	V
Collector-emitter voltage		$V_{CEO}$	900	V
Emitter-base voltage		$V_{EBO}$	5	V
Collector current	DC	$I_C$	16	A
	Pulse	$I_{CP}$	32	
Base current		$I_B$	8	A
Collector power dissipation		$P_C$	210	W
Junction temperature		$T_j$	150	°C
Storage temperature range		$T_{stg}$	-55~150	°C

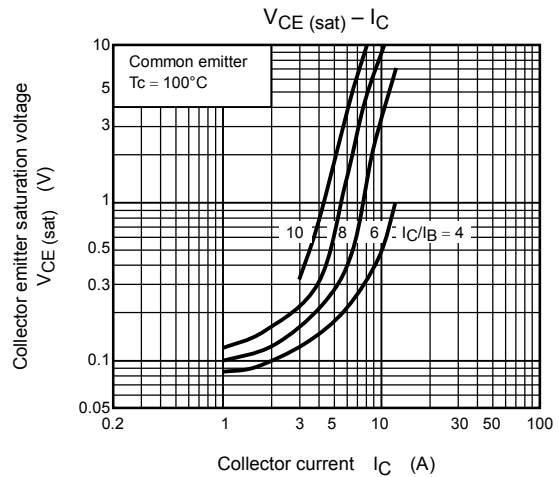
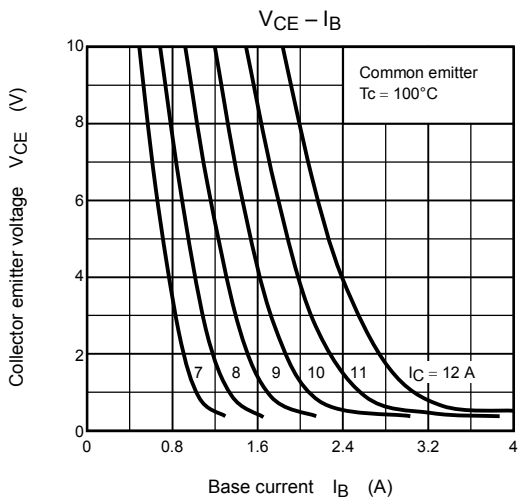
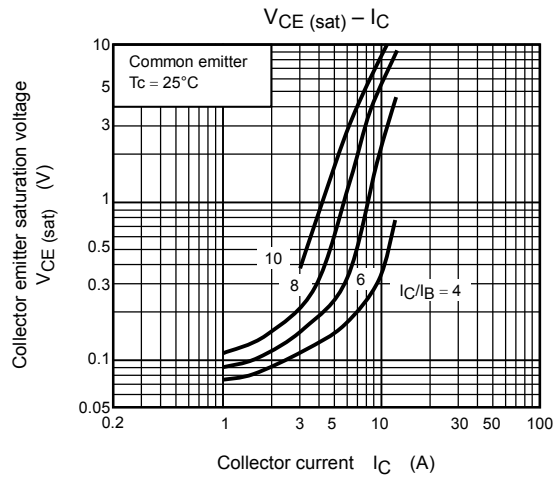
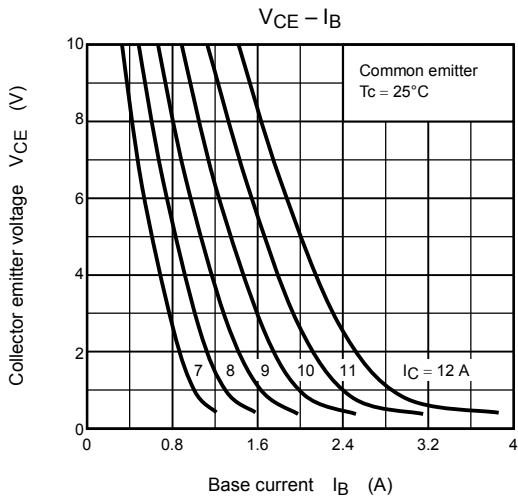
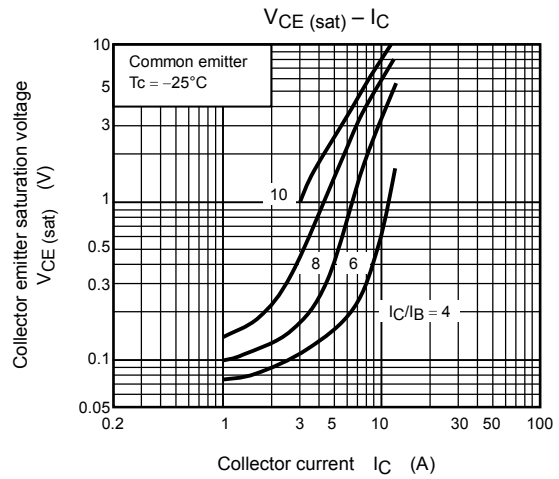
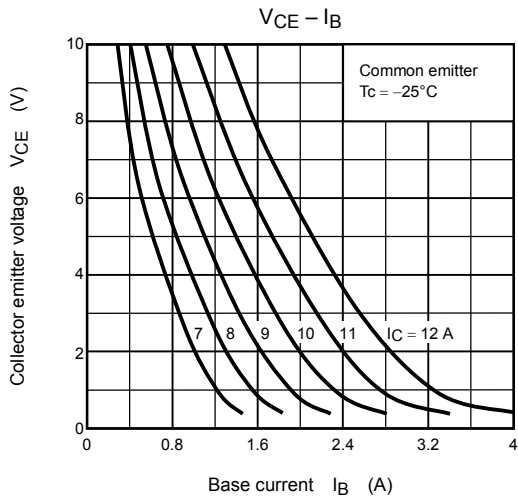


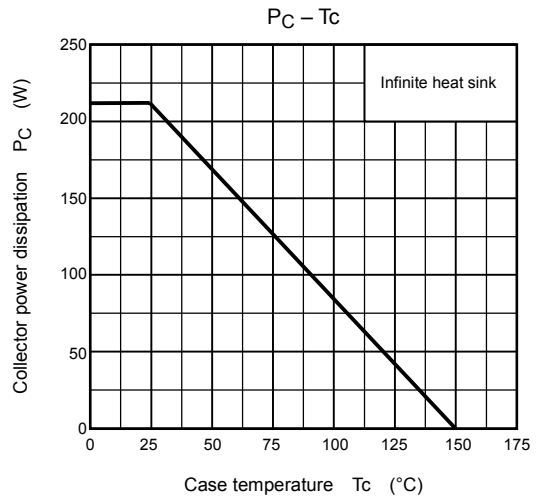
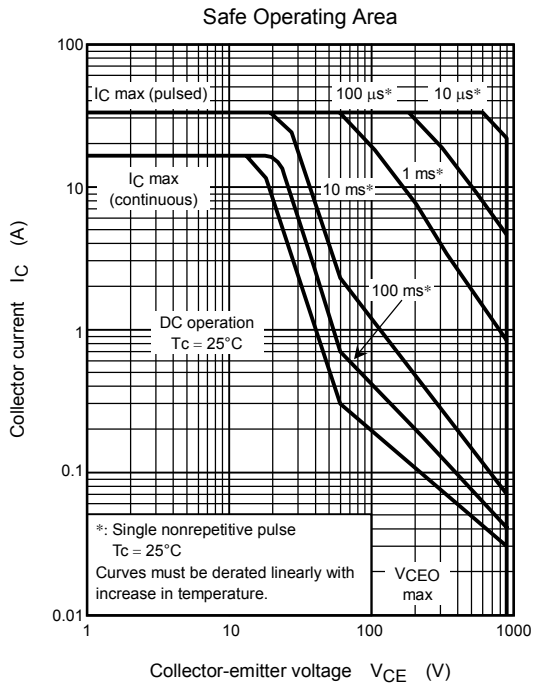
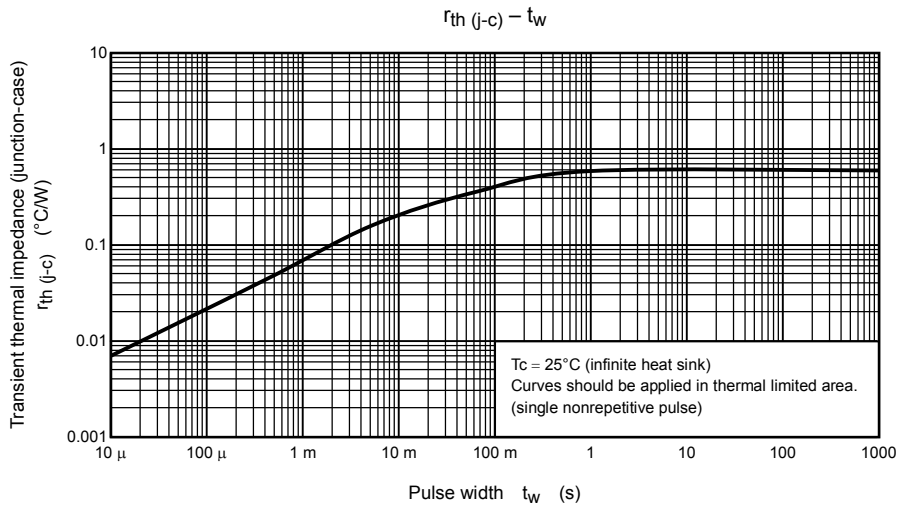
Weight: 9.75 g (typ.)

## Electrical Characteristics (Tc = 25°C)

Characteristics		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	$\mu\text{A}$
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	900	—	—	V
DC current gain	$h_{FE(1)}$	$V_{CE} = 5\text{ V}, I_C = 2\text{ A}$	20	—	55	—	
	$h_{FE(2)}$	$V_{CE} = 5\text{ V}, I_C = 8\text{ A}$	7	—	12.5		
	$h_{FE(3)}$	$V_{CE} = 5\text{ V}, I_C = 12\text{ A}$	4.8	—	7.5		
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 12\text{ A}, I_B = 3\text{ A}$	—	—	3	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = 12\text{ A}, I_B = 3\text{ A}$	—	—	1.3	V
Transition frequency		$f_T$	$V_{CE} = 10\text{ V}, I_C = 0.1\text{ A}$	—	2	—	MHz
Collector output capacitance		$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	310	—	pF
Switching time	Storage time	$t_{stg}$	$I_{CP} = 8\text{ A}, I_{B1}(\text{end}) = 1.2\text{ A}, f_H = 32\text{ kHz}$	—	4.0	5.0	$\mu\text{s}$
	Fall time	$t_f$		—	0.15	0.35	







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