TOSHIBA Transistor Silicon PNP Triple Diffused Type (PCT process)

## 2SA1320

# High Voltage Switching Applications Color TV Chroma Output Applications

• High voltage: VCEO = -250 V

• Low Cre: 1.8 pF (max)

• Complementary to 2SC3333

### **Absolute Maximum Ratings (Ta = 25°C)**

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		V <sub>CBO</sub>	-250	V	
Collector-emitter voltage		V <sub>CEO</sub>	-250	V	
Emitter-base voltage		V <sub>EBO</sub>	-5	V	
Collector current	DC	I <sub>C</sub>	-50	mA	
	Pulsed	I <sub>CP</sub>	-100		
Base current		Ι <sub>Β</sub>	-20	mA	
Collector power dissipation		PC	0.6	W	
Junction temperature		Tj	150	°C	
Storage temperature range		T <sub>stg</sub>	<b>−55~150</b>	°C	

1. EMITTER
2. COLLECTOR
3. BASE

JEDEC TO-92

JEITA SC-43

TOSHIBA 2-5F1B

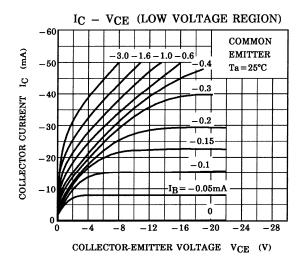
Weight: 0.21 g (typ.)

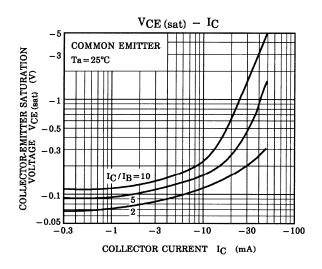
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

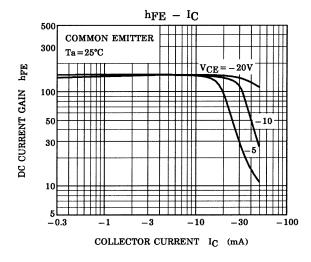
temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

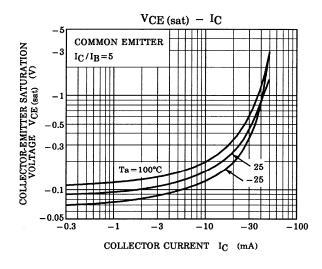
#### **Electrical Characteristics (Ta = 25°C)**

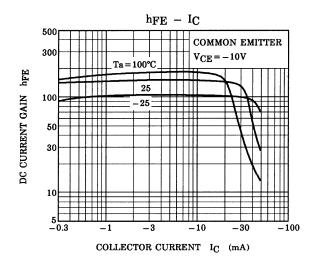
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	$V_{CB} = -200 \text{ V}, I_{E} = 0$	_	_	-0.1	μА
Emitter cut-off current	I <sub>EBO</sub>	$V_{EB} = -5 \text{ V}, I_{C} = 0$	_	_	-0.1	μА
Collector-emitter breakdown voltage	V (BR) CEO	$I_C = -1 \text{ mA}, I_B = 0$	-250	_	_	٧
DC current gain	h <sub>FE</sub>	$V_{CE} = -20 \text{ V}, I_{C} = -25 \text{ mA}$	50	_	_	
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$	_	_	-1.5	V
Base-emitter voltage	V <sub>BE</sub>	$V_{CE} = -20 \text{ V}, I_{C} = -25 \text{ mA}$	_	-0.75	_	V
Transition frequency	f <sub>T</sub>	$V_{CE} = -10 \text{ V}, I_{C} = -10 \text{ mA}$	60	80		MHz
Reverse transfer capacitance	C <sub>re</sub>	$V_{CB} = -30 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	_	_	1.8	pF

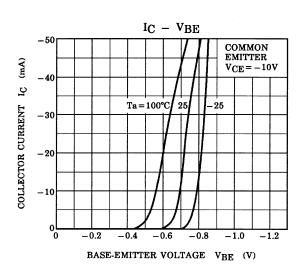


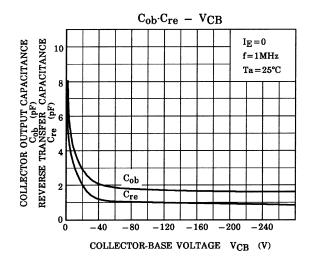


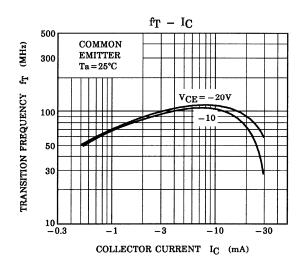


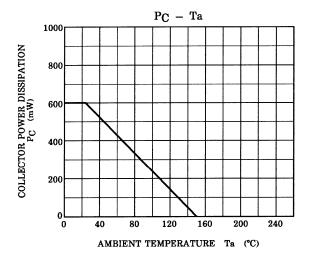


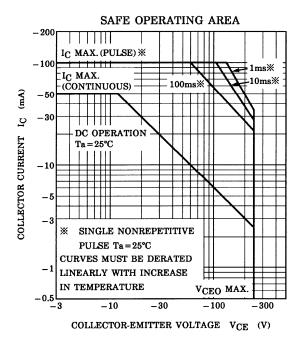












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