## <u>TOSHIBA</u>

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

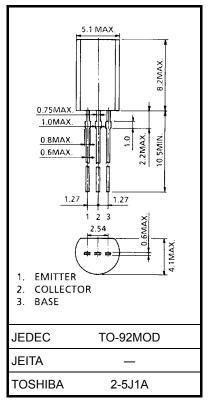
# 2SC2482

High-Voltage Switching and Amplifier Applications Color TV Horizontal Driver Applications Color TV Chroma Output Applications

- High breakdown voltage: VCEO = 300 V
- Small collector output capacitance:  $C_{ob} = 3.0 \text{ pF}$  (typ.)
- Recommended for chroma output and driver applications for line-operated TV horizontal.

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	300	V
Collector-emitter voltage	V <sub>CEO</sub>	300	V
Emitter-base voltage	V <sub>EBO</sub>	7	V
Collector current	Ι <sub>C</sub>	100	mA
Base current	Ι <sub>Β</sub>	50	mA
Collector power dissipation	P <sub>C</sub>	900	mW
Junction temperature	Tj	150	°C
Storage temperature range	T <sub>stg</sub>	−55 to 150	°C



Weight: 0.36 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.

lemperature/current/voltage, etc.) are within the absolute maximum ratings.

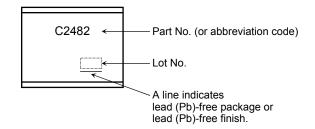
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



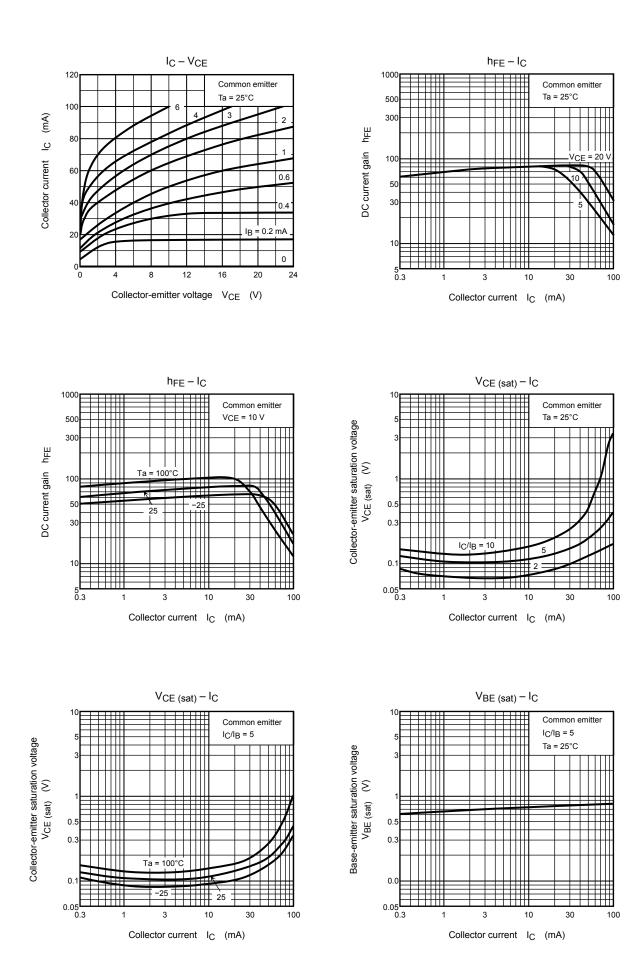
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 240 V, I <sub>E</sub> = 0	_	_	1.0	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 7 V, I <sub>C</sub> = 0			1.0	μA
DC current gain -	h <sub>FE (1)</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 4 mA	20	_	_	
	h <sub>FE (2)</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 20 mA	30	_	150	
Collector-emitter saturation voltage	V <sub>CE (sat)</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA	_	_	1.0	V
Base-emitter saturation voltage	V <sub>BE (sat)</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA	_	_	1.0	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 20 mA	50	_	_	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 20 V, I <sub>E</sub> = 0, f = 1 MHz	_	3.0	_	pF

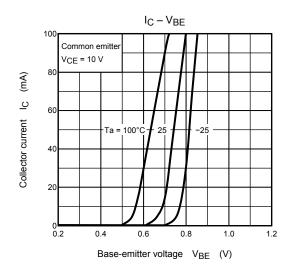
#### Marking

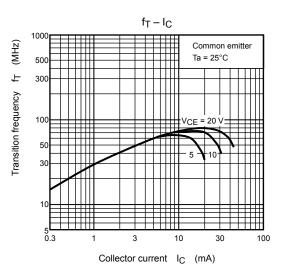


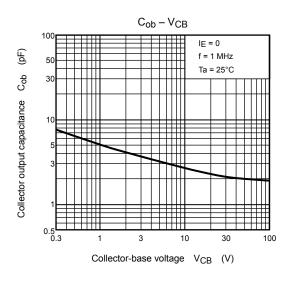
### **TOSHIBA**



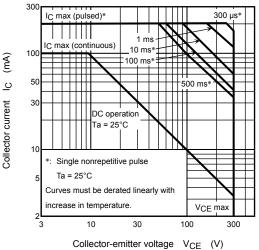
## **TOSHIBA**







Safe Operating Area



#### **RESTRICTIONS ON PRODUCT USE**

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- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.
   In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc.
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