

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC4448

CHROMA OUTPUT APPLICATIONS FOR HDTV

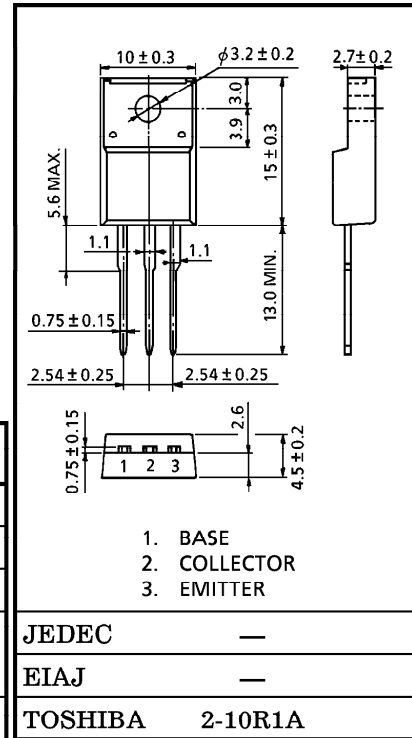
VIDEO OUTPUT APPLICATIONS FOR HIGH RESOLUTION DISPLAY

Unit in mm

- High Voltage : $V_{CEO} = 250V$
- Small Collector Output Capacitance : $C_{ob} = 3.3pF$ (Typ.)
($V_{CB} = 30V$)
- High Transition Frequency : $f_T = 240MHz$ (Typ.)
- Collector Metal (Fin) is Fully Covered with Mold Resin.

MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	250	V
Collector-Emitter Voltage		V_{CEO}	250	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	150	mA
	Peak	I_{CP}	300	
Base Current		I_B	50	mA
Collector Power Dissipation	$T_c = 25^\circ C$	P_C	10	W
	$T_a = 25^\circ C$		2	
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55~150	$^\circ C$



JEDEC	—
EIAJ	—
TOSHIBA	2-10R1A

Weight : 1.7g

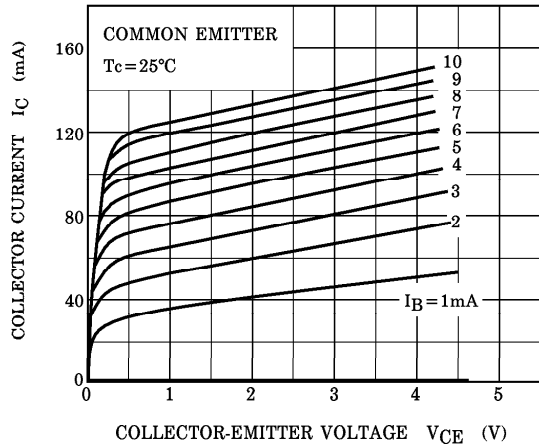
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 200V, I_E = 0$	—	—	100	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	—	—	10	μA
DC Current Gain	$h_{FE} (1)$	$V_{CE} = 10V, I_C = 10mA$	40	—	200	
	$h_{FE} (2)$	$V_{CE} = 10V, I_C = 100mA$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE} (sat)$	$I_C = 50mA, I_B = 5mA$	—	—	1.0	V
Base-Emitter Saturation Voltage	$V_{BE} (sat)$	$I_C = 50mA, I_B = 5mA$	—	—	1.0	V
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 40mA$	—	240	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 30V, f = 1MHz, I_E = 0$	—	3.3	4.0	pF

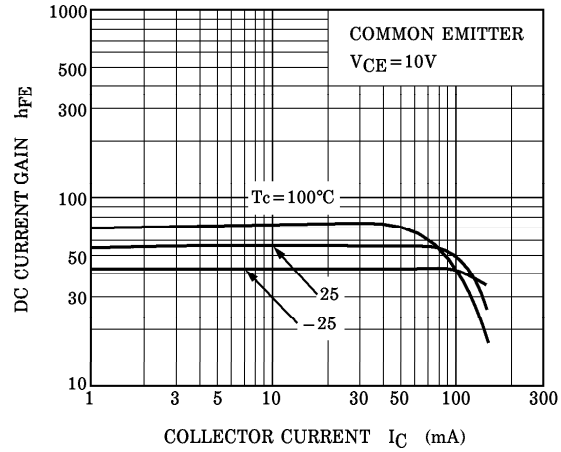
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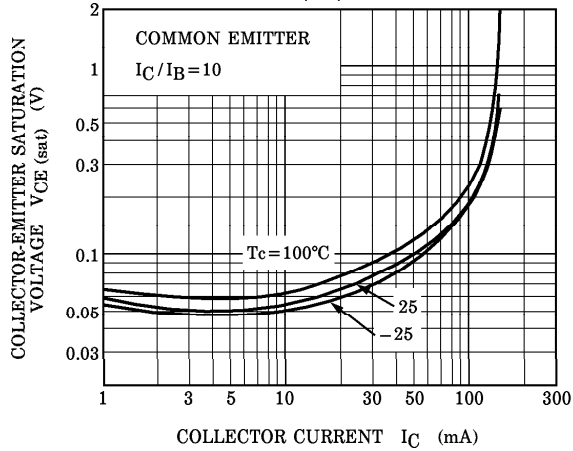
$I_C - V_{CE}$



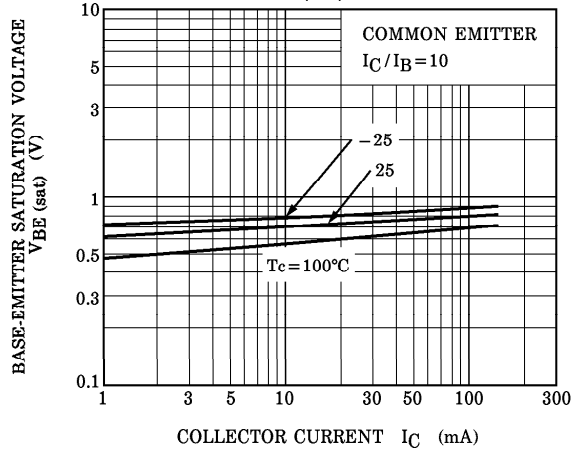
$h_{FE} - I_C$



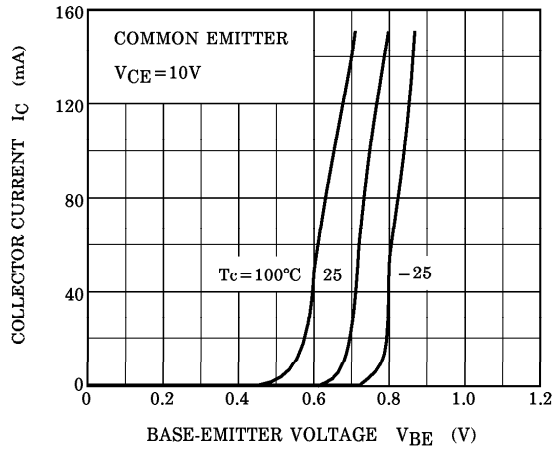
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$I_C - V_{BE}$



$f_T - I_C$

