

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE

2SC4439

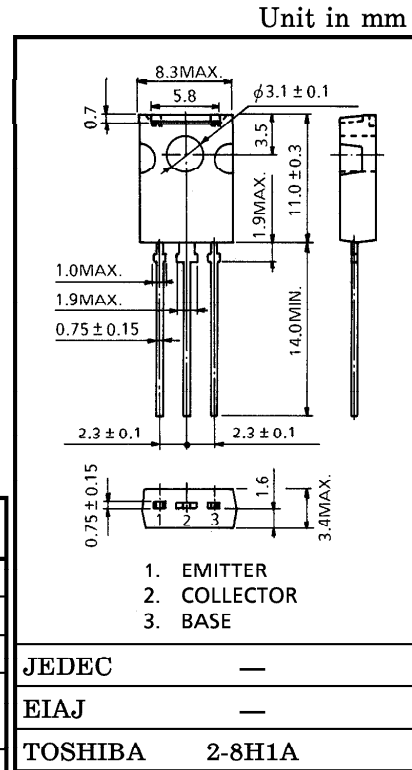
VIDEO OUTPUT STAGE IN HIGH RESOLUTION DISPLAY.

HIGH SPEED SWITCHING APPLICATIONS.

- High Transition Frequency.
: $f_T=400\text{MHz}$ (Typ.) ($V_{CE}=10\text{V}$, $I_C=70\text{mA}$)
- Low Collector Output Capacitance
: $C_{ob}<5\text{pF}$ (Max.) ($V_{CB}=30\text{V}$)
- High Voltage : $V_{CEO}=150\text{V}$
- High Collector Power Dissipation Capability : $P_C=8\text{W}$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	180	V
Collector-Emitter Voltage		V_{CEO}	150	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	0.3	A
	Pulse	I_{CP}	0.5	
Base Current		I_B	0.2	A
Collector Power Dissipation	$T_a=25^\circ\text{C}$	P_C	1.5	W
	$T_c=25^\circ\text{C}$		8	
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$



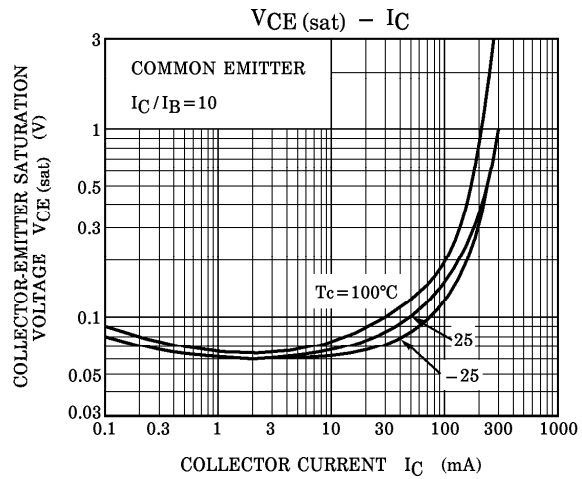
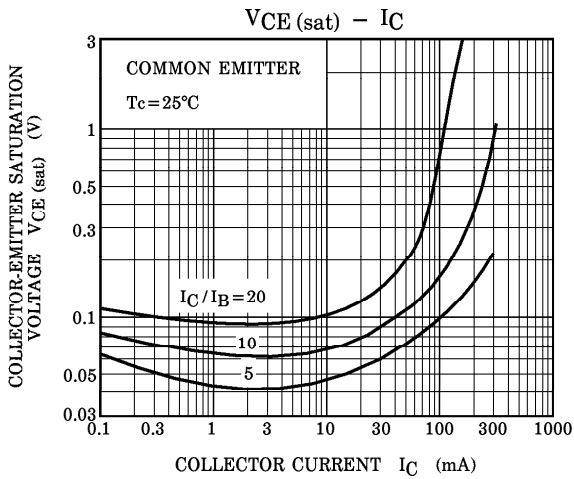
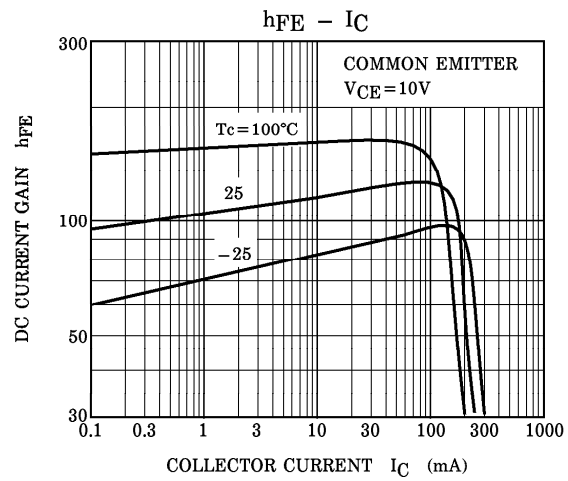
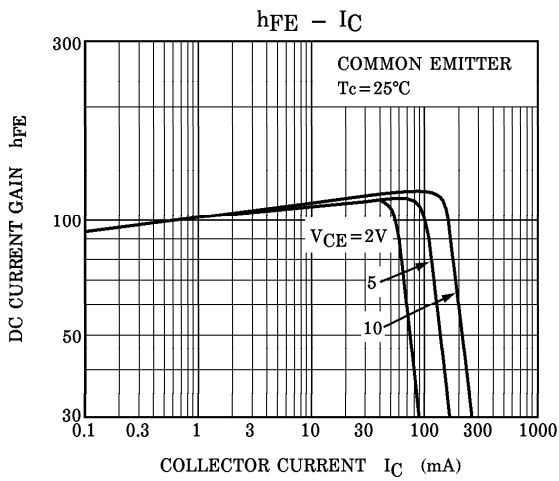
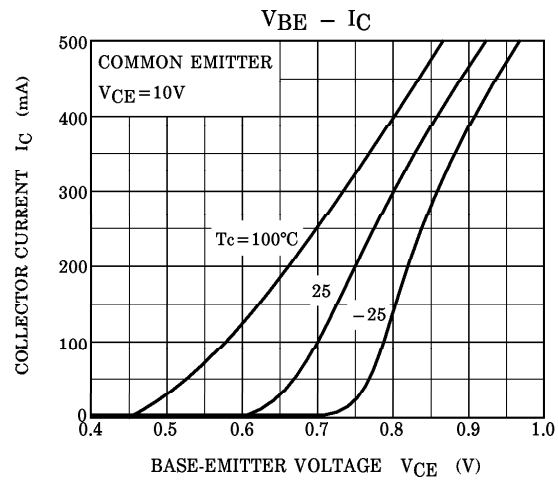
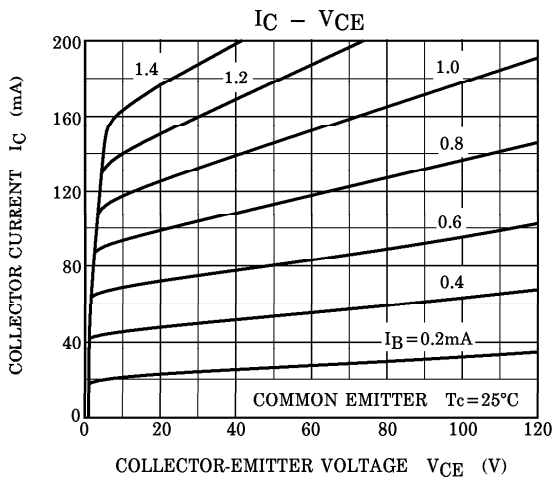
Weight : 0.82g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=150\text{V}$, $I_E=0$	—	—	10	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$	—	—	10	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	150	—	—	V
DC Current Gain	$h_{FE}(1)$	$V_{CE}=10\text{V}$, $I_C=50\text{mA}$	40	—	240	
	$h_{FE}(2)$	$V_{CE}=10\text{V}$, $I_C=200\text{mA}$	20	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=200\text{mA}$, $I_B=20\text{mA}$	—	1.5	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=200\text{mA}$, $I_B=20\text{mA}$	—	1.5	2.0	V
Transition Frequency	f_T	$V_{CE}=10\text{V}$, $I_C=70\text{mA}$	300	400	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=30\text{V}$, $f=1\text{MHz}$, $I_E=0$	—	4.0	5.0	pF

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