

TENTATIVE

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE

2SA1801

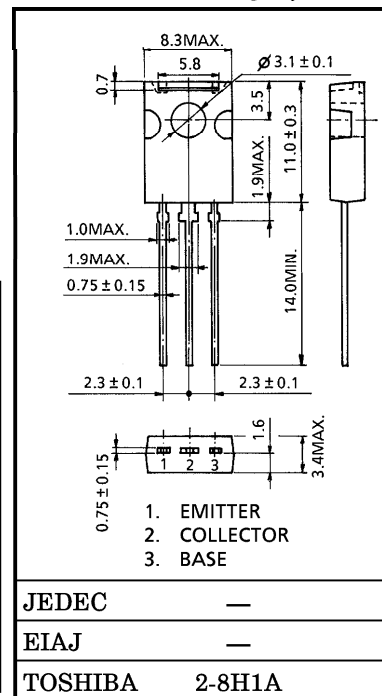
VIDEO OUTPUT STAGE IN HIGH RESOLUTION DISPLAY

Unit in mm

- High Transition Frequency : $f_T = 600 \text{ MHz (Typ.)}$
($V_{CE} = 10 \text{ V}$,
 $I_C = 50 \text{ mA}$)
- Low Collector Output Capacitance : $C_{ob} = 5.0 \text{ pF (Typ.)}$
($V_{CB} = -30 \text{ V}$)

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-120	V
Collector-Emitter Voltage		V_{CEO}	-120	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-300	mA
	Pulse	I_{CP}	-500	
Base Current		I_B	-100	mA
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	PC	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	$^\circ\text{C}$



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

Weight : 0.82 g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -120 \text{ V}$, $I_E = 0$	—	—	-1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5 \text{ V}$, $I_C = 0$	—	—	-10	μA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -1 \text{ mA}$, $I_B = 0$	-120	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10 \text{ mA}$, $I_B = 0$	-120	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -10 \text{ V}$, $I_C = -50 \text{ mA}$	40	—	240	
	$h_{FE(2)}$	$V_{CE} = -10 \text{ V}$, $I_C = -200 \text{ mA}$	25	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -50 \text{ mA}$, $I_B = -5 \text{ mA}$	—	—	-1.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -50 \text{ mA}$, $I_B = -5 \text{ mA}$	—	—	-1.5	V
Transition Frequency	f_T	$V_{CE} = -10 \text{ V}$, $I_C = -50 \text{ mA}$	—	600	—	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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