

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD2498

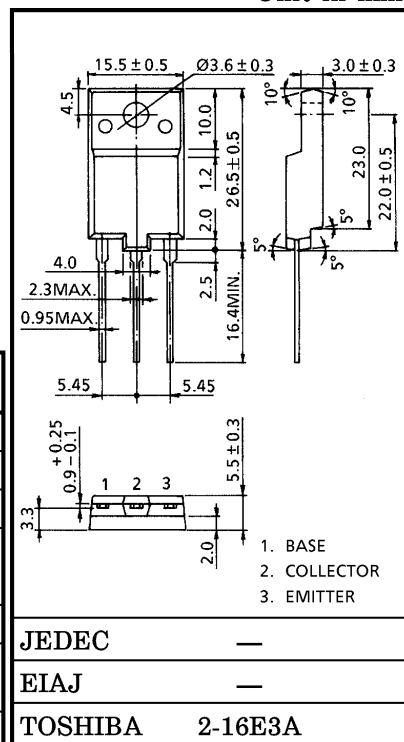
HORIZONTAL DEFLECTION OUTPUT FOR COLOR TV

Unit in mm

- High Voltage : $V_{CB0} = 1500V$
- Low Saturation Voltage : $V_{CE(sat)} = 5V$ (Max.) ($I_C = 4A, I_B = 0.8A$)
- High Speed : $t_f = 0.4\mu s$ (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_{CB0}	1500	V
Collector-Emitter Voltage		V_{CEO}	600	V
Emitter-Base Voltage		V_{EB0}	5	V
Collector Current	DC	I_C	6	A
	Pulse	I_{CP}	12	
Base Current		I_B	3	A
Collector Power Dissipation ($T_c = 25^\circ C$)		P_C	50	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55~150	$^\circ C$



JEDEC	—
EIAJ	—
TOSHIBA	2-16E3A

Weight : 5.5g

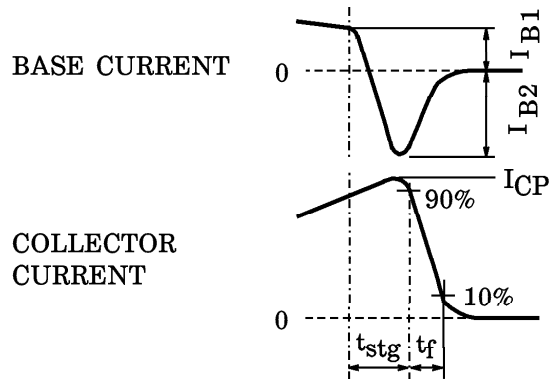
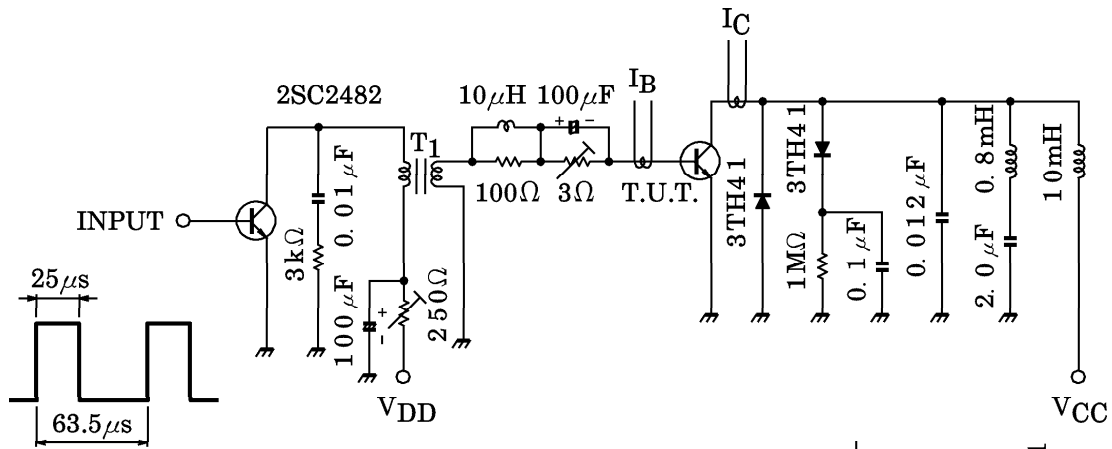
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CB0}	$V_{CB} = 1500V, I_E = 0$	—	—	1	mA
Emitter Cut-off Current	I_{EB0}	$V_{EB} = 5V, I_C = 0$	—	—	10	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	600	—	—	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1A$	10	—	30	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 4A$	5	—	9	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4A, I_B = 0.8A$	—	—	5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4A, I_B = 0.8A$	—	0.9	1.2	V
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 0.1A$	—	2	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	95	—	pF
Switching Time (Fig.1)	Storage Time	$I_{CP} = 4A, I_{B1}(end) = 0.8A$ $f_H = 15.75kHz$	—	8	11	μs
	Fall Time		—	0.4	0.7	

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Fig.1 SWITCHING TIME TEST CIRCUIT



Base Current Gradient

$$dI_B / dt = \frac{I_{B1} + I_{B2}}{t_{stg}} \text{ (A / } \mu\text{s)}$$

$$\cong 0.3 \text{ (A / } \mu\text{s)}$$

