

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD2498

HORIZONTAL DEFLECTION OUTPUT FOR HIGH
RESOLUTION DISPLAY, COLOR TV

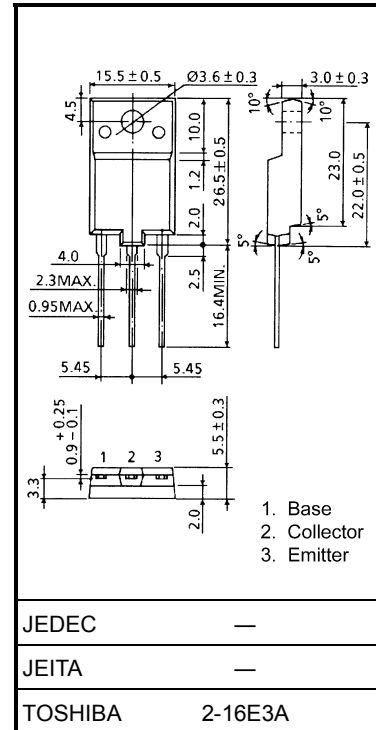
HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CBO} = 1500\text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 5\text{ V (Max.)}$
- High Speed : $t_f = 0.4\text{ }\mu\text{s (Typ.)}$
- Collector Metal (Fin) is Fully Covered with Mold Resin

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	1500	V
Collector-Emitter Voltage		V_{CEO}	600	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	6	A
	Pulse	I_{CP}	12	
Base Current		I_B	3	A
Collector Power Dissipation		P_C	50	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$

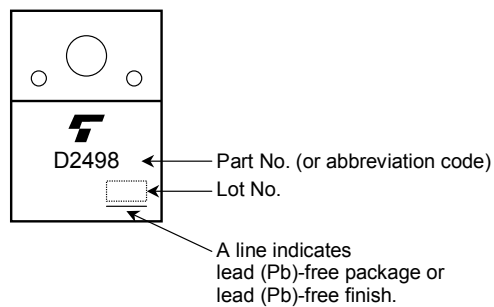
Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	2-16E3A

Weight: 5.5 g (typ.)

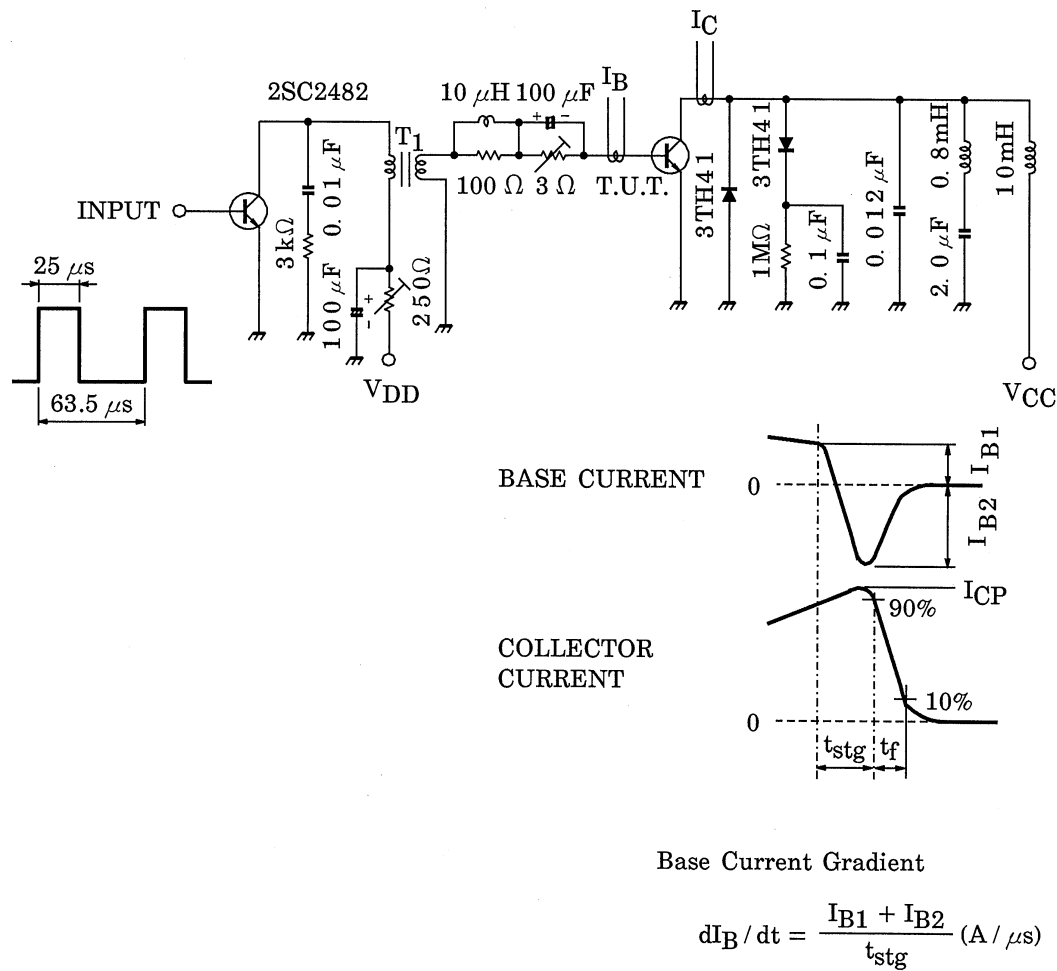
MARKING

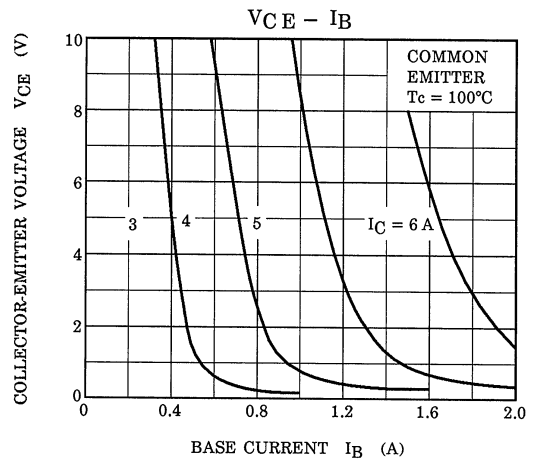
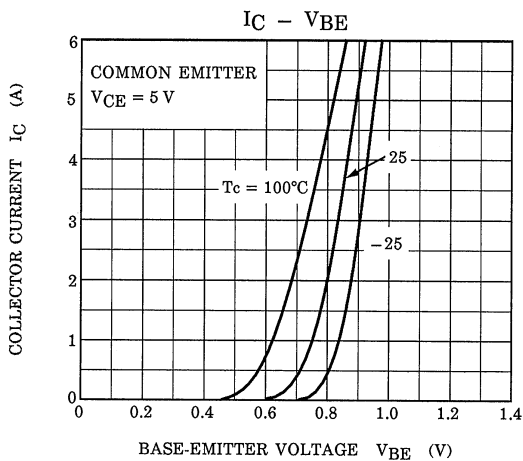
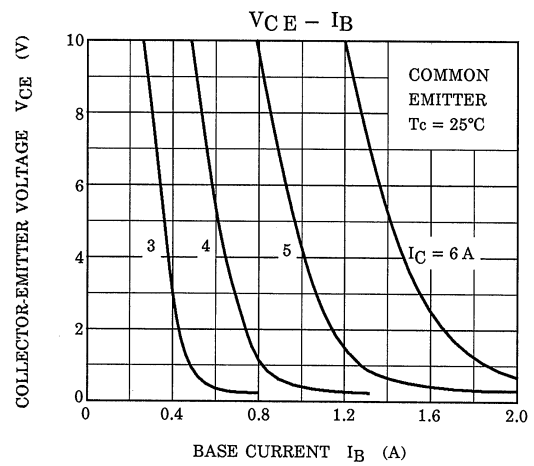
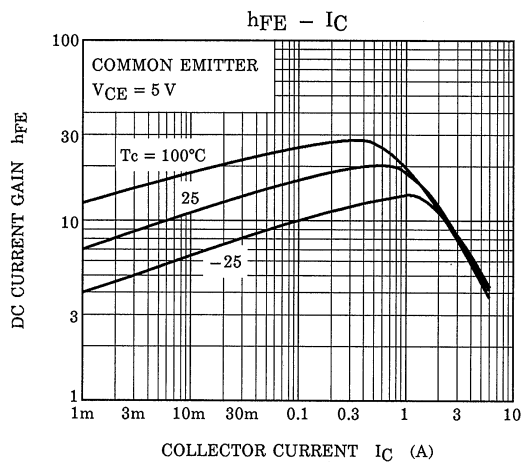
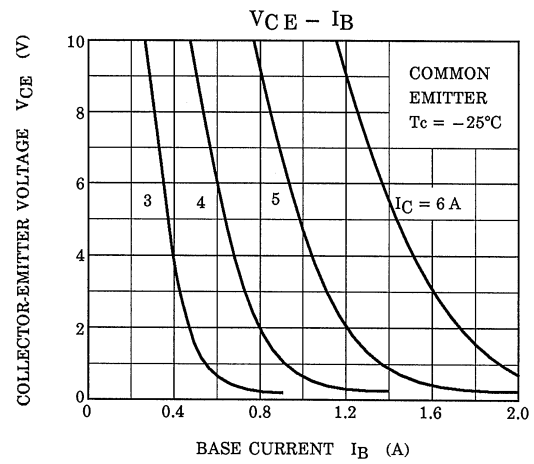
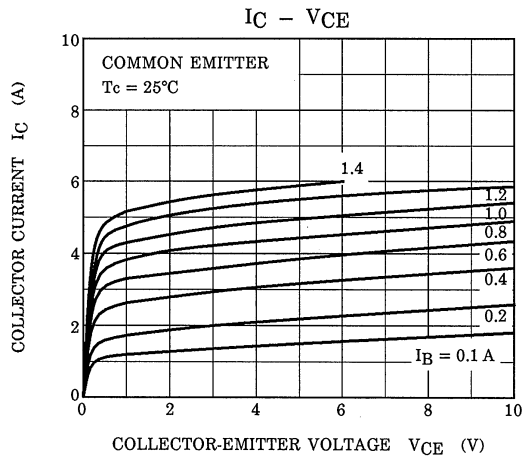


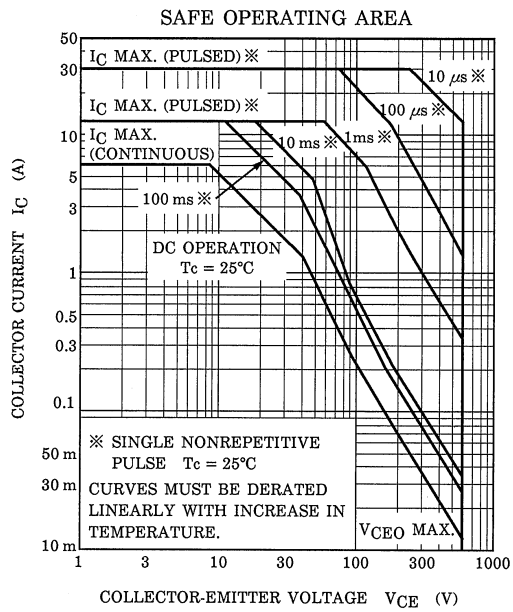
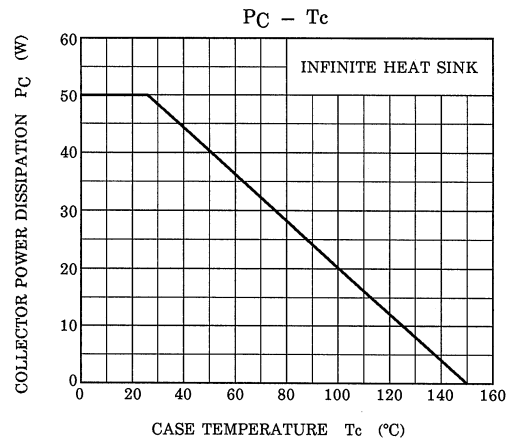
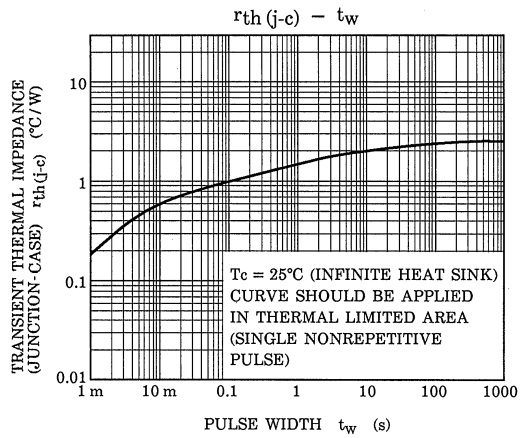
ELECTRICAL CHARACTERISTICS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 1500 \text{ V}, I_E = 0$	—	—	1	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	10	μA
Collector-Emitter Breakdown Voltage	$V_{(BR) CEO}$	$I_C = 10 \text{ mA}, I_B = 0$	600	—	—	V
DC Current Gain	$h_{FE (1)}$	$V_{CE} = 5 \text{ V}, I_C = 1 \text{ A}$	10	—	30	—
	$h_{FE (2)}$	$V_{CE} = 5 \text{ V}, I_C = 4 \text{ A}$	5	—	9	
Collector-Emitter Saturation Voltage	$V_{CE (sat)}$	$I_C = 4 \text{ A}, I_B = 0.8 \text{ A}$	—	—	5	V
Base-Emitter Saturation Voltage	$V_{BE (sat)}$	$I_C = 4 \text{ A}, I_B = 0.8 \text{ A}$	—	0.9	1.2	V
Transition Frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}$	—	2	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	95	—	pF
Switching Time (Fig.1)	Storage Time	$I_{CP} = 4 \text{ A}, I_{B1} (\text{end}) = 0.8 \text{ A}$ $f_H = 15.75 \text{ kHz}$	—	7	10	μs
	Fall Time		—	0.4	0.7	

Fig.1 SWITCHING TIME TEST CIRCUIT







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