

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD2498

HORIZONTAL DEFLECTION OUTPUT FOR HIGH RESOLUTION DISPLAY, COLOR TV

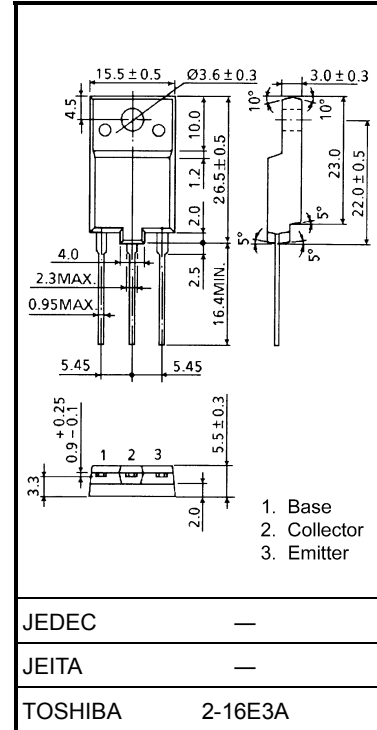
HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : VCBO = 1500 V
- Low Saturation Voltage : VCE (sat) = 5 V (Max.)
- High Speed : tf = 0.4 μs (Typ.)
- Collector Metal (Fin) is Fully Covered with Mold Resin

MAXIMUM RATINGS (Tc = 25°C)

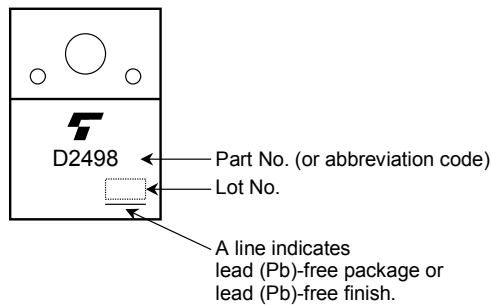
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		VCBO	1500	V
Collector-Emitter Voltage		VCEO	600	V
Emitter-Base Voltage		VEBO	5	V
Collector Current	DC	IC	6	A
	Pulse	ICP	12	
Base Current		IB	3	A
Collector Power Dissipation		PC	50	W
Junction Temperature		Tj	150	°C
Storage Temperature Range		Tstg	-55~150	°C

Unit: mm



Weight: 5.5 g (typ.)

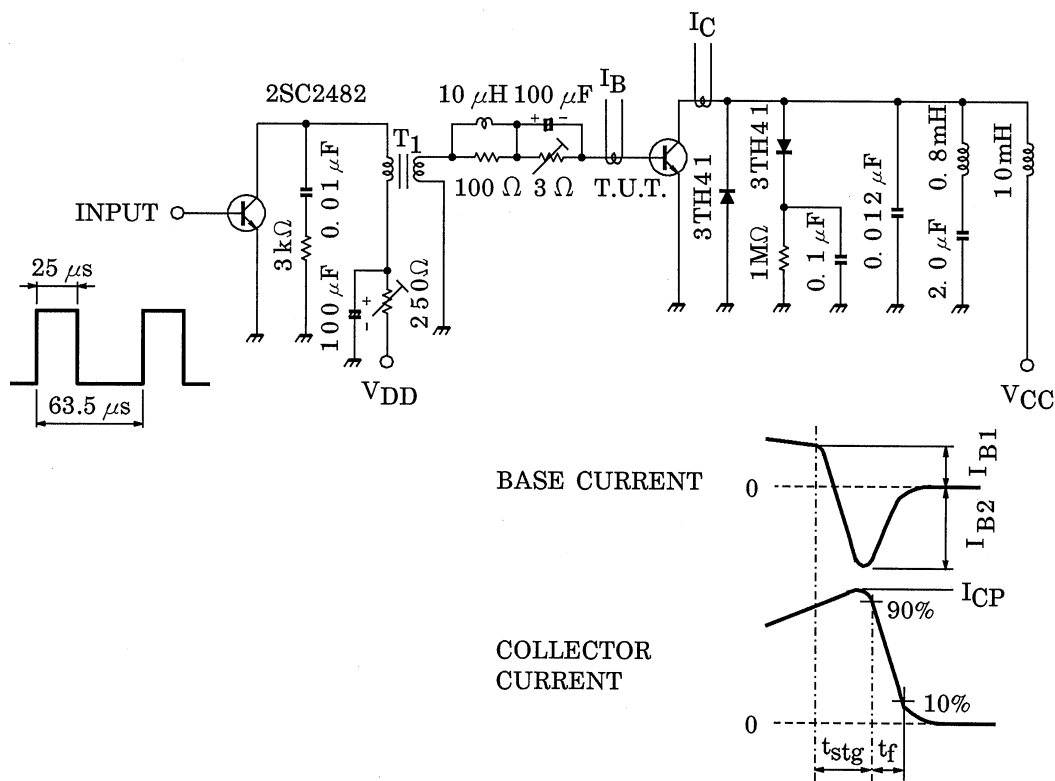
MARKING



ELECTRICAL CHARACTERISTICS (Tc = 25°C)

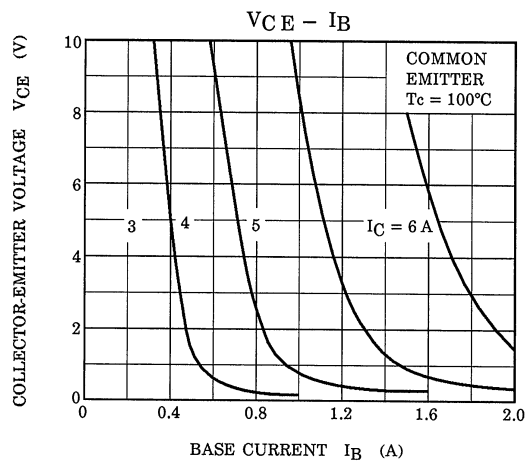
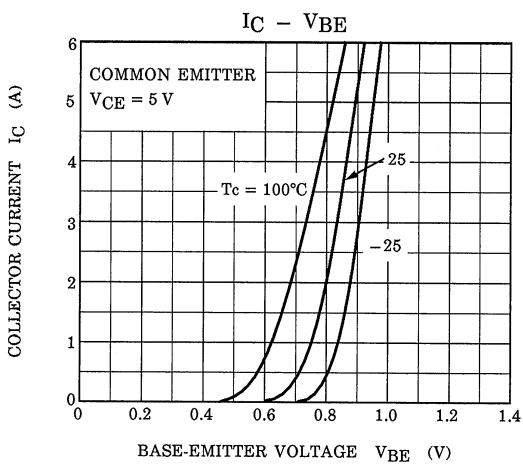
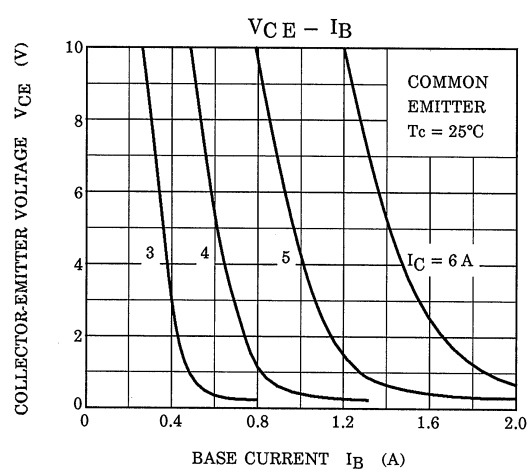
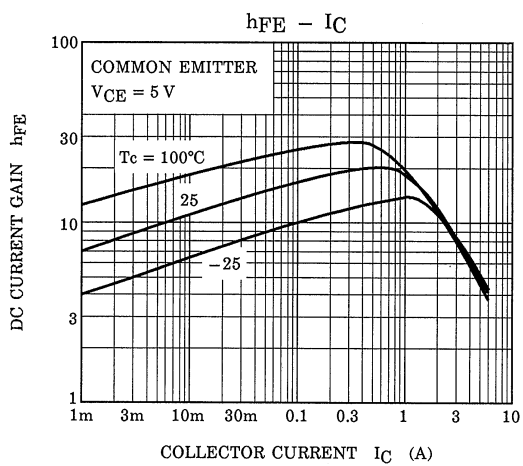
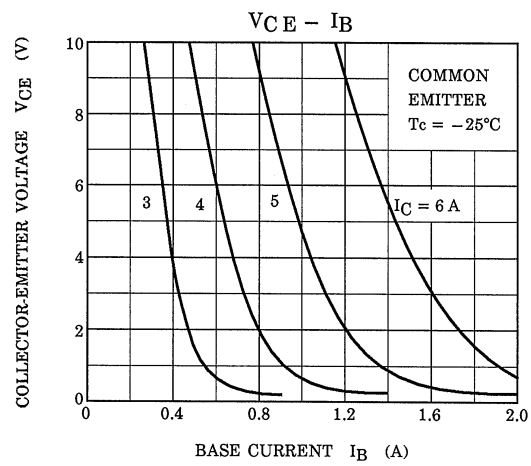
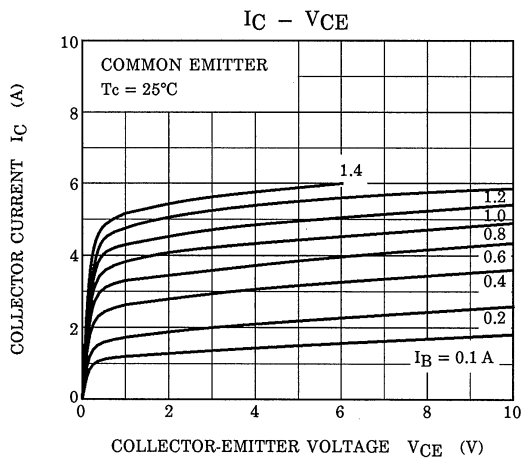
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} = 1500 V, I _E = 0	—	—	1	mA
Emitter Cut-off Current	I _{EBO}	V _{EB} = 5 V, I _C = 0	—	—	10	μA
Collector-Emitter Breakdown Voltage	V _{(BR) CEO}	I _C = 10 mA, I _B = 0	600	—	—	V
DC Current Gain	h _{FE} (1)	V _{CE} = 5 V, I _C = 1 A	10	—	30	—
	h _{FE} (2)	V _{CE} = 5 V, I _C = 4 A	5	—	9	
Collector-Emitter Saturation Voltage	V _{CE (sat)}	I _C = 4 A, I _B = 0.8 A	—	—	5	V
Base-Emitter Saturation Voltage	V _{BE (sat)}	I _C = 4 A, I _B = 0.8 A	—	0.9	1.2	V
Transition Frequency	f _T	V _{CE} = 10 V, I _C = 0.1 A	—	2	—	MHz
Collector Output Capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	95	—	pF
Switching Time (Fig.1)	Storage Time	I _{CP} = 4 A, I _{B1} (end) = 0.8 A f _H = 15.75 kHz	—	7	10	μs
	Fall Time		—	0.4	0.7	

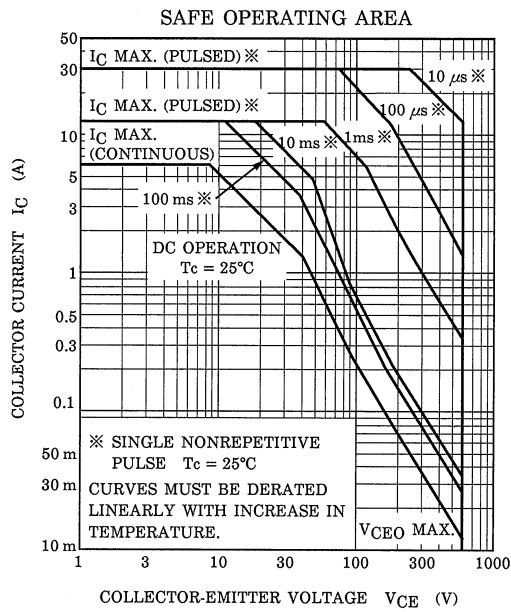
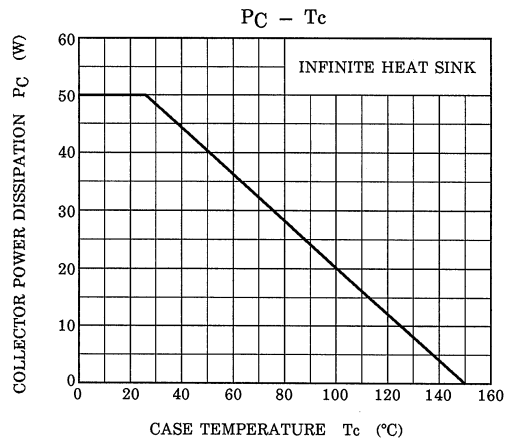
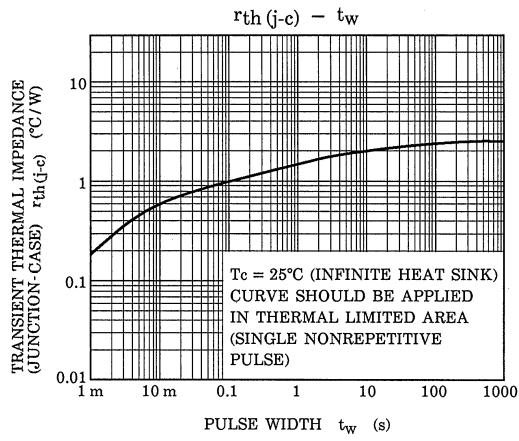
Fig.1 SWITCHING TIME TEST CIRCUIT



Base Current Gradient

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





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