

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5048

HORIZONTAL DEFLECTION OUTPUT FOR HIGH RESOLUTION DISPLAY, COLOR TV

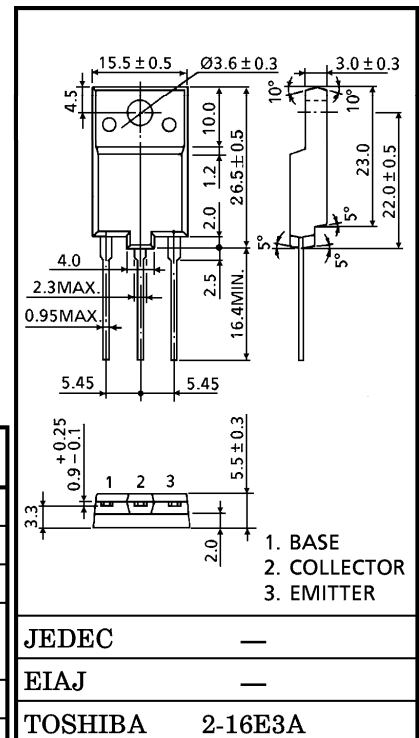
Unit in mm

HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CBO}=1500V$
- Low Saturation Voltage
: $V_{CE(sat)}=3V$ (Max.) ($I_C=8A, I_B=2.0A$)
- High Speed : $t_f=0.15\mu s$ (Typ.)
- Collector Metal (Fin) is Fully Covered with Mold Resin. (IS) Package)

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

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	12
	Pulse	I_{CP}	24
Base Current	I_B	6	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	$^\circ C$



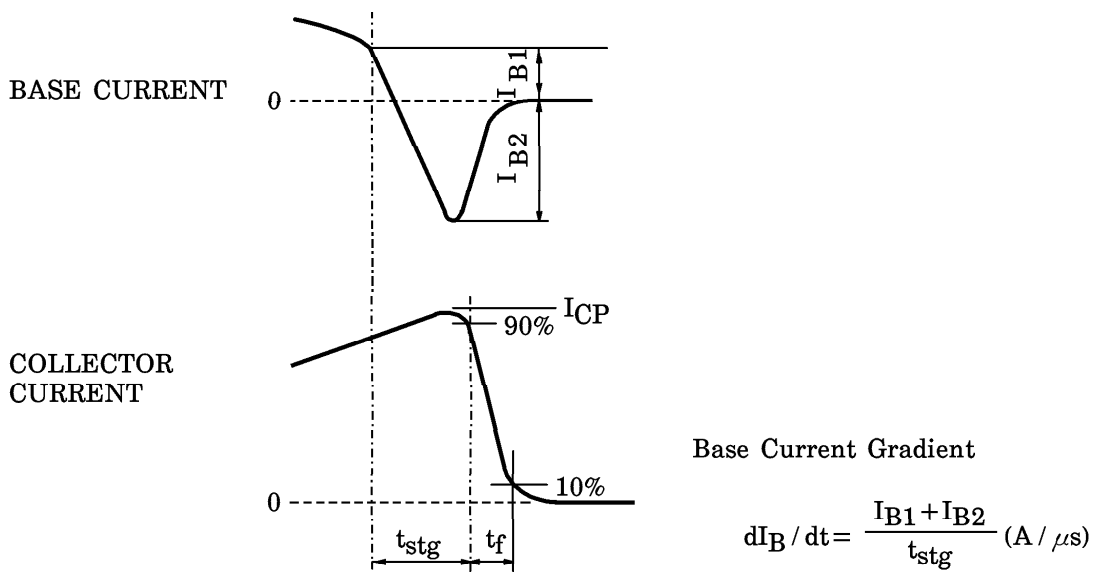
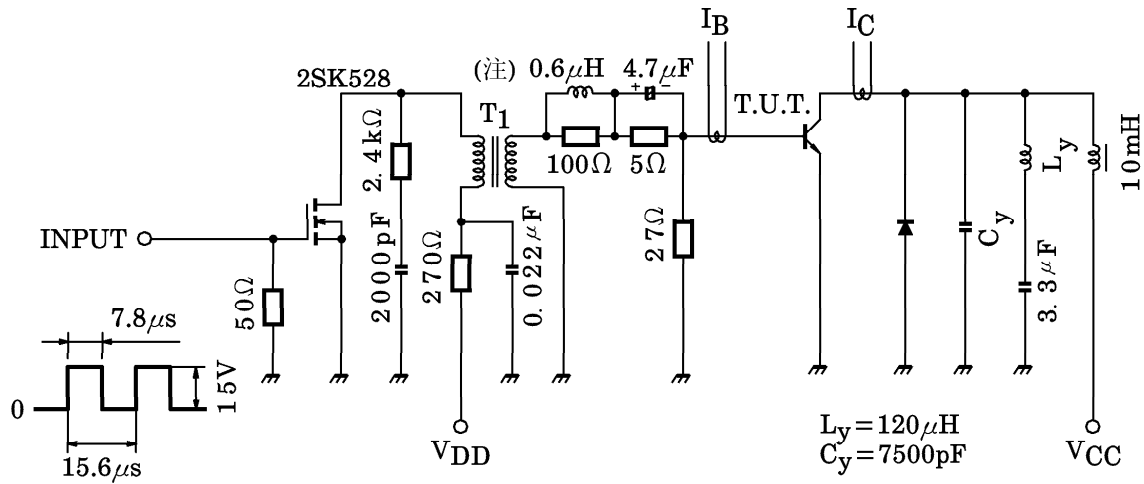
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=1500V, I_E=0$	—	—	1	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	—	—	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	—
	$h_{FE(2)}$	$V_{CE}=5V, I_C=8A$	4	—	8	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=8A, I_B=2A$	—	—	3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=8A, I_B=2A$	—	1.0	1.4	V
Transition Frequency	f_T	$V_{CE}=10V, I_E=0.1A$	—	1.7	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$	—	160	—	pF
Switching Time (Fig.1)	Storage Time	$I_{CP}=6A, I_{B1}(end)=1.2A$ $f_H=64kHz$	—	2.5	4.0	μs
	Fall Time		—	0.15	0.3	

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Fig.1 SWITCHING TIME TEST CIRCUIT



Note : Leakage Inductance of secondary winding LB is 1.2 μH.

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