

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD2553

HORIZONTAL DEFLECTION OUTPUT FOR HIGH RESOLUTION DISPLAY, COLOR TV

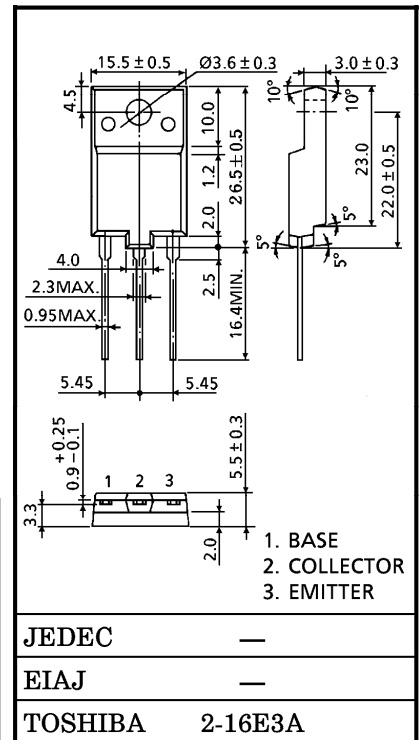
HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CBO} = 1700\text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 5\text{ V (Max.)}$
- High Speed : $t_f = 0.3\ \mu\text{s (Typ.)}$
- Built-in Damper Type
- Collector Metal (Fin) is Fully Covered with Mold Resin.

MAXIMUM RATINGS (Ta = 25°C)

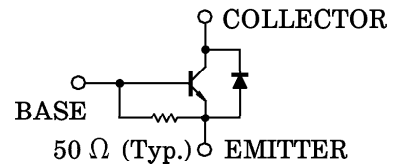
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	1700	V
Collector-Emitter Voltage	V_{CEO}	600	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	8
	Pulse	I_{CP}	16
Base Current	I_B	4	A
Collector Power Dissipation (Tc = 25°C)	P_C	50	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

Unit in mm



Weight : 5.5 g (Typ.)

EQUIVALENT CIRCUIT



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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 1700 V, I _E = 0	—	—	1	mA
Emitter Cut-off Current		IEBO	V _{EB} = 5 V, I _C = 0	66	—	200	mA
Emitter-Base Breakdown Voltage		V _{EB0}	I _E = 400 mA, I _C = 0	5	—	—	V
DC Current Gain		h _{FE} (1)	V _{CE} = 5 V, I _C = 1 A	8	—	28	—
		h _{FE} (2)	V _{CE} = 5 V, I _C = 6 A	5	—	9	
Collector-Emitter Saturation Voltage		V _{CE(sat)}	I _C = 6 A, I _B = 1.2 A	—	—	5	V
Base-Emitter Saturation Voltage		V _{BE(sat)}	I _C = 6 A, I _B = 1.2 A	—	0.9	1.2	V
Forward Voltage (Damper Diode)		-V _F	I _F = 8 A	—	1.6	2.0	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	—	155	—	pF
Switching Time (Fig.1)	Storage Time	t _{stg}	I _{CP} = 6 A, I _{B1} (end) = 1.5 A f _H = 15.75 kHz	—	9	12	μs
	Fall Time	t _f		—	0.3	0.7	

Fig.1 Switching time test circuit

