

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SC5339

HORIZONTAL DEFLECTION OUTPUT FOR MEDIUM RESOLUTION DISPLAY, COLOR TV

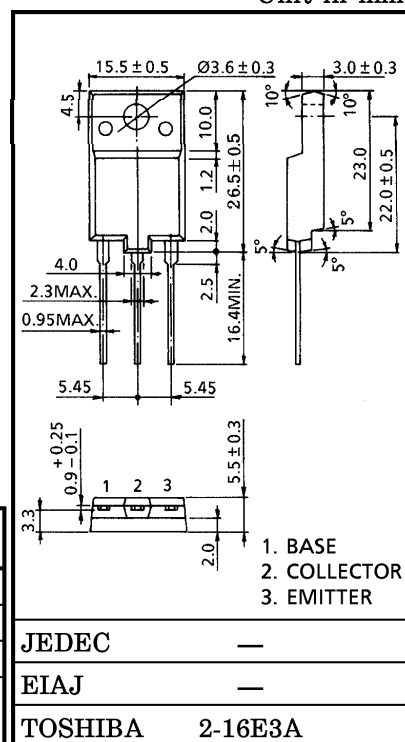
Unit in mm

HIGH SPEED SWITCHING APPLICATIONS

- High Voltage : $V_{CB0} = 1500V$
- Low Saturation Voltage : $V_{CE(sat)} = 5V$ (Max.)
- High Speed : $t_f = 0.2\mu s$ (Typ.)
- Built-in Damper Type
- Collector Metal (Fin) is Fully Covered with Mold Resin.

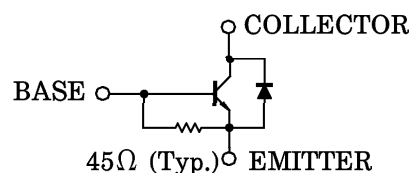
MAXIMUM RATINGS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	1500	V
Collector-Emitter Voltage	V_{CEO}	600	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	7
	Pulse	I_{CP}	14
Base Current	I_B	3.5	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	$^\circ C$



Weight : 5.5g (Typ.)

EQUIVALENT CIRCUIT



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ELECTRICAL CHARACTERISTICS (Ta = 25°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}	$V_{EB} = 5V, I_C = 0$	71	—	250	mA
Emitter-Base Breakdown Voltage		V_{EBO}	$I_E = 400mA, I_C = 0$	5	—	—	V
DC Current Gain		$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1A$	10	—	30	
		$h_{FE(2)}$	$V_{CE} = 5V, I_C = 5A$	4	—	8	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 5A, I_B = 1.25A$	—	—	5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C = 5A, I_B = 1.25A$	—	1.0	1.3	V
Forward Voltage (Damper Diode)		$-V_F$	$I_F = 5A$	—	1.35	1.8	V
Transition Frequency		f_T	$V_{CE} = 10V, I_C = 0.1A$	—	2.4	—	MHz
Collector Output Capacitance		C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	—	82	—	pF
Switching Time	Storage Time	t_{stg}	$I_{CP} = 5A, I_{B1}(\text{end}) = 1.1A, f_H = 31.5kHz$	—	4	6	μs
	Fall Time	t_f		—	0.2	0.5	

