

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

# 2SC5339

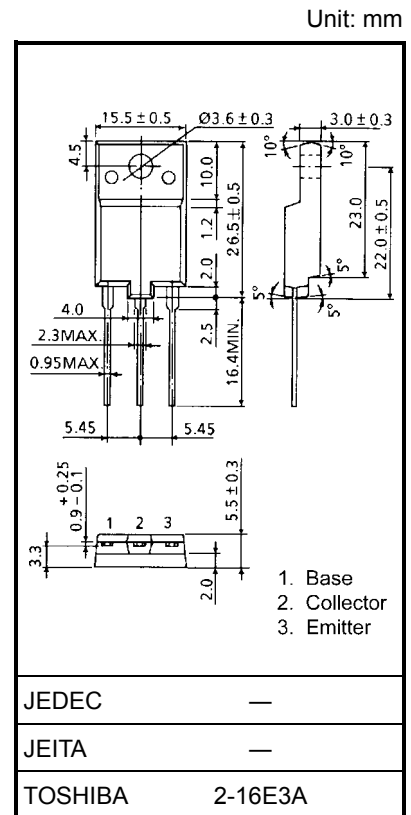
HORIZONTAL DEFLECTION OUTPUT FOR MEDIUM RESOLUTION DISPLAY, COLOR TV

HIGH SPEED SWITCHING APPLICATIONS

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

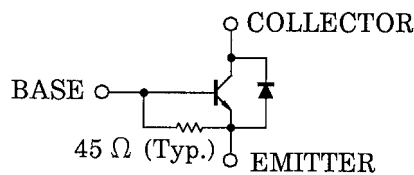
## MAXIMUM RATINGS ( $T_c = 25^\circ\text{C}$ )

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	$I_C$	7
	Pulse	$I_{CP}$	14
Base Current	$I_B$	3.5	A
Collector Power Dissipation	$P_C$	50	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$



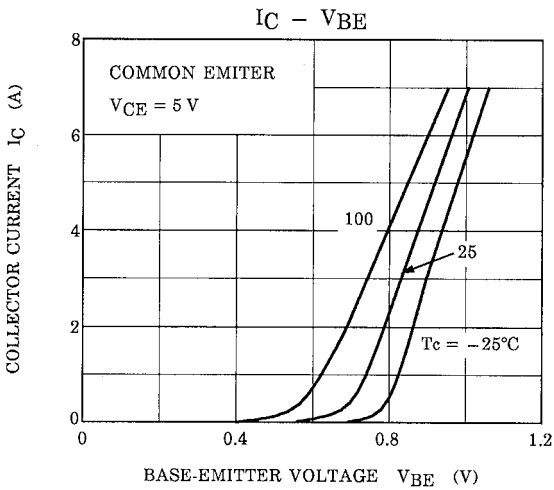
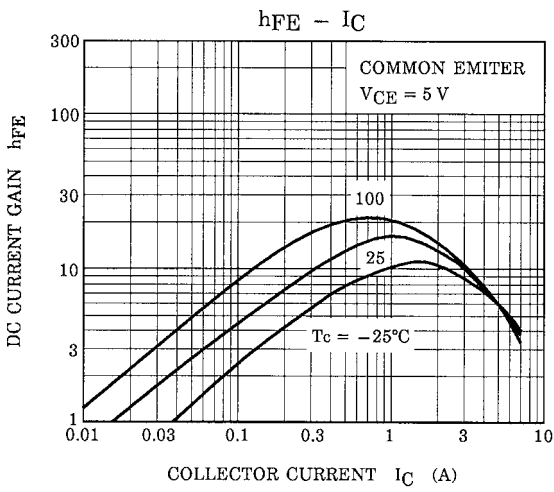
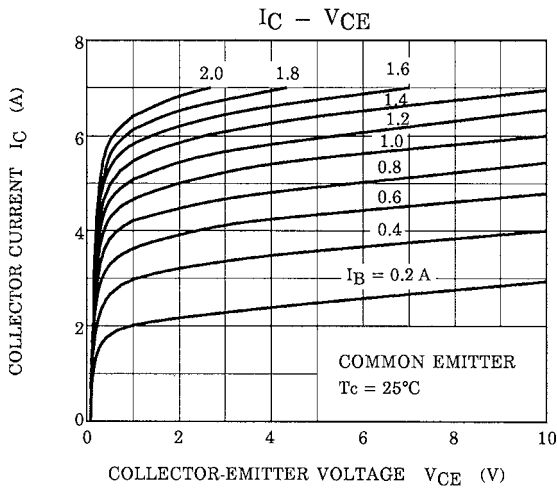
Weight: 5.5 g (typ.)

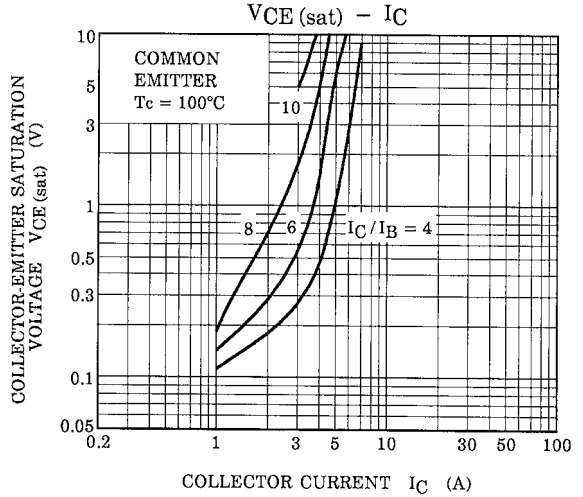
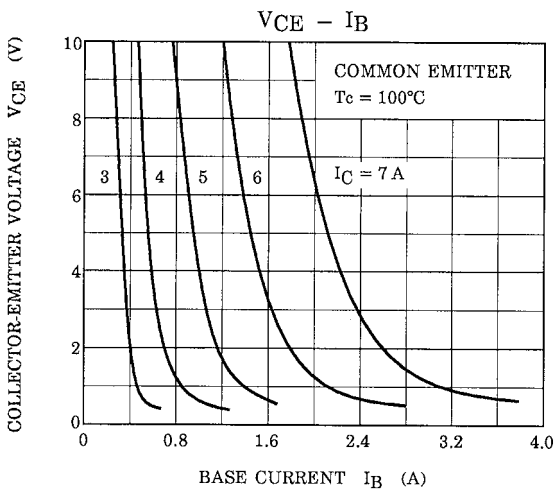
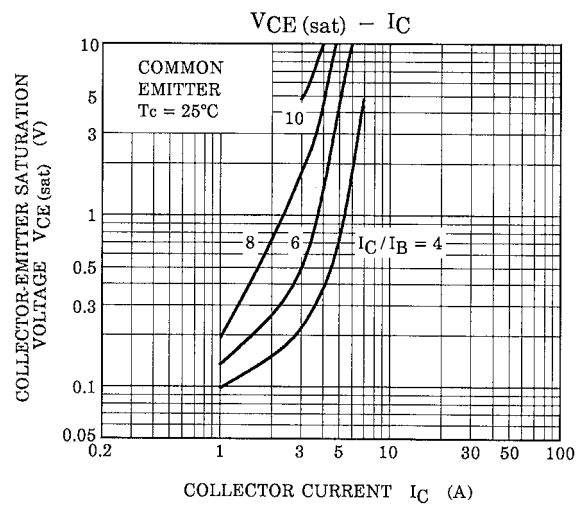
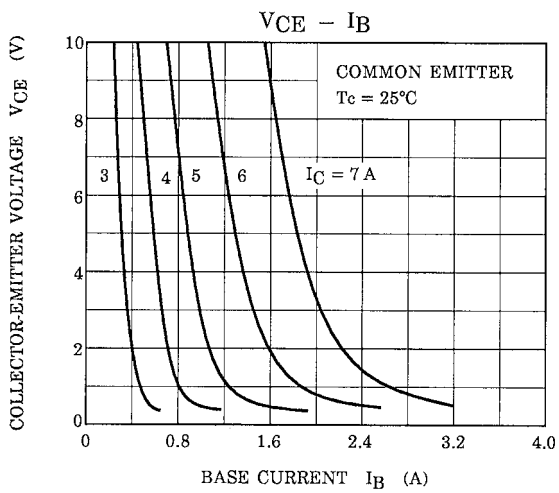
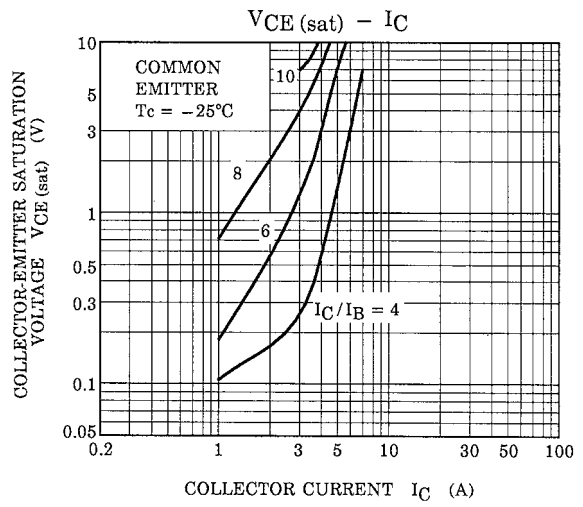
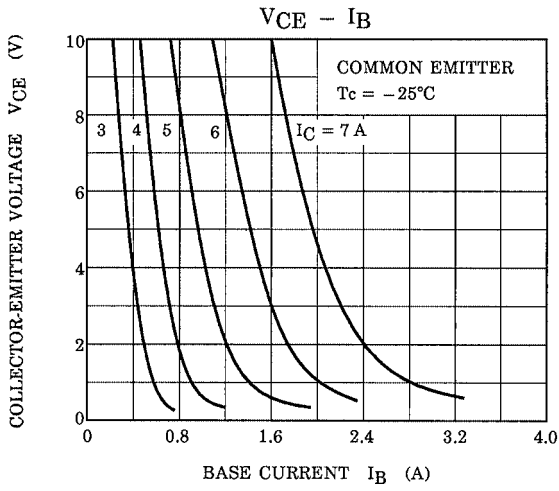
## EQUIVALENT CIRCUIT

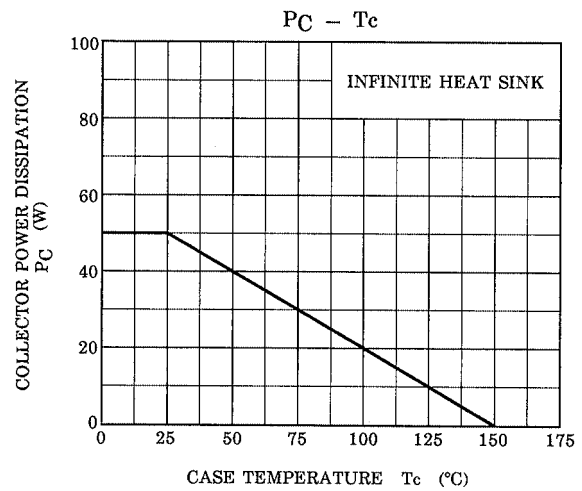
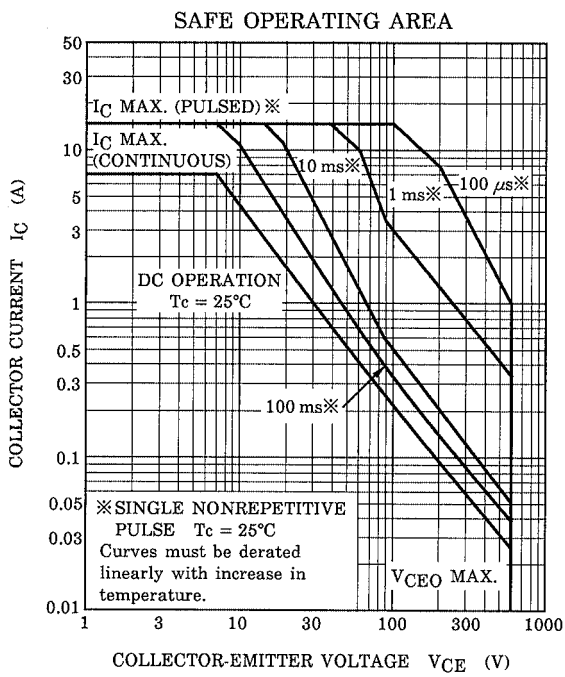
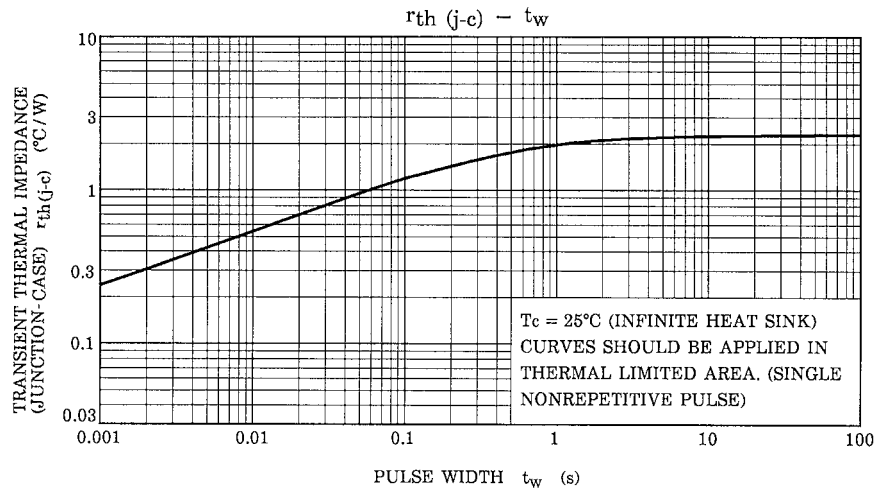


## ELECTRICAL CHARACTERISTICS (T<sub>c</sub> = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current		I <sub>CBO</sub>	V <sub>CB</sub> = 1500 V, I <sub>E</sub> = 0	—	—	1	mA
Emitter Cut-off Current		I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0	71	—	250	mA
Emitter-Base Breakdown Voltage		V <sub>(BR)EBO</sub>	I <sub>E</sub> = 400 mA, I <sub>C</sub> = 0	5	—	—	V
DC Current Gain		h <sub>FE</sub> (1)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 A	10	—	30	—
		h <sub>FE</sub> (2)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 5 A	4	—	8	
Collector-Emitter Saturation Voltage		V <sub>CE(sat)</sub>	I <sub>C</sub> = 5 A, I <sub>B</sub> = 1.25 A	—	—	5	V
Base-Emitter Saturation Voltage		V <sub>BE(sat)</sub>	I <sub>C</sub> = 5 A, I <sub>B</sub> = 1.25 A	—	1.0	1.3	V
Forward Voltage (Damper Diode)		V <sub>F</sub>	I <sub>F</sub> = 5 A	—	1.35	1.8	V
Transition Frequency		f <sub>T</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 0.1 A	—	2.4	—	MHz
Collector Output Capacitance		C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	—	82	—	pF
Switching Time	Storage Time	t <sub>stg</sub>	I <sub>CP</sub> = 5 A, I <sub>B1</sub> (end) = 1.1 A f <sub>H</sub> = 31.5 kHz	—	4	6	μs
	Fall Time	t <sub>f</sub>		—	0.2	0.5	







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