

TOSHIBA Transistor Silicon NPN Triple Diffused Type

2SC6010

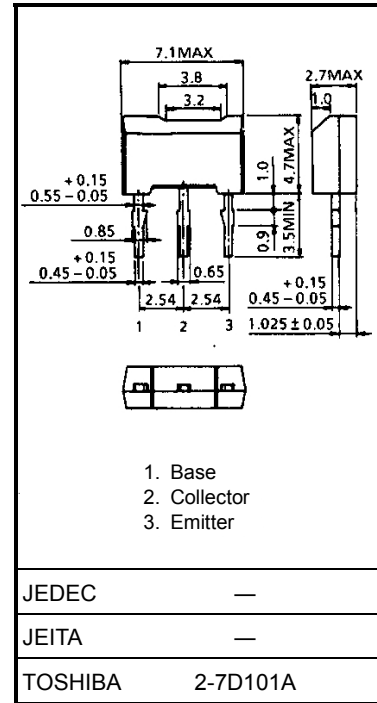
High Voltage Switching Applications
 Switching Regulator Applications
 DC-DC Converter Applications

- High speed switching: $t_f = 0.24\mu s$ (max) ($I_C = 0.3A$)

Maximum Ratings ($T_a = 25^\circ C$)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	600	V
Collector-emitter voltage	V_{CEX}	600	V
Collector-emitter voltage	V_{CEO}	285	V
Emitter-base voltage	V_{EBO}	8	V
Collector current	DC	I_C	1.0
	Pulse	I_{CP}	2.0
Base current	I_B	0.5	A
Collector power dissipation	$T_a = 25^\circ C$	P_C	1.0
Junction temperature	T_j	150	$^\circ C$
Storage temperature range	T_{stg}	-55 to 150	$^\circ C$

Unit: mm

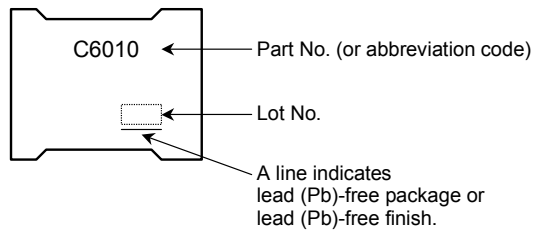


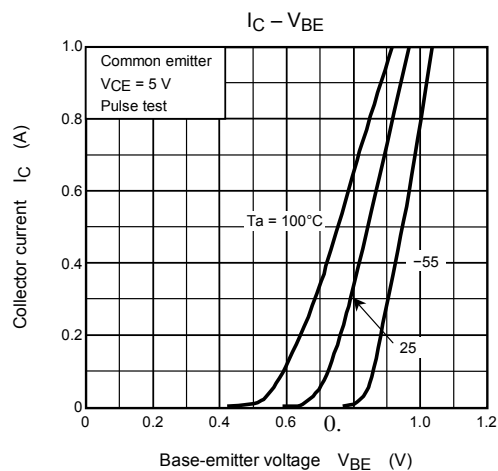
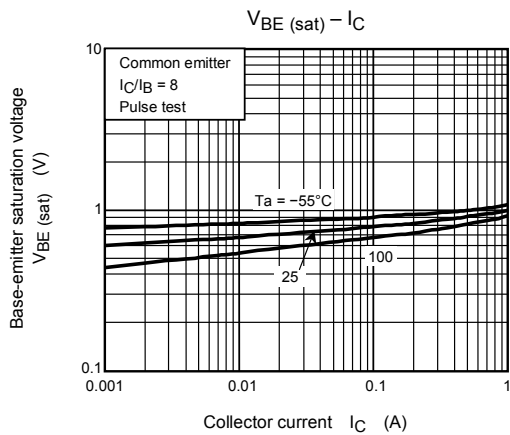
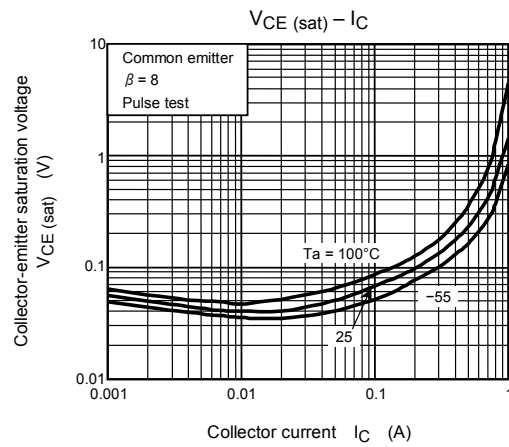
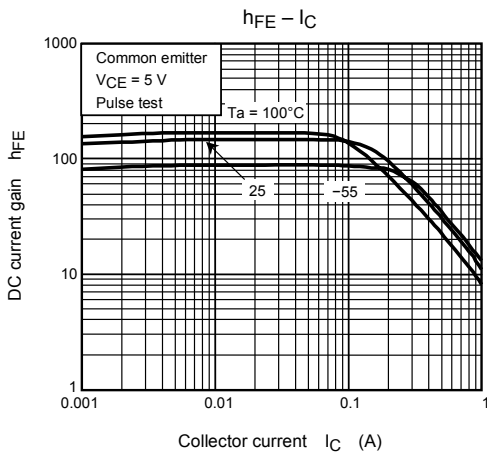
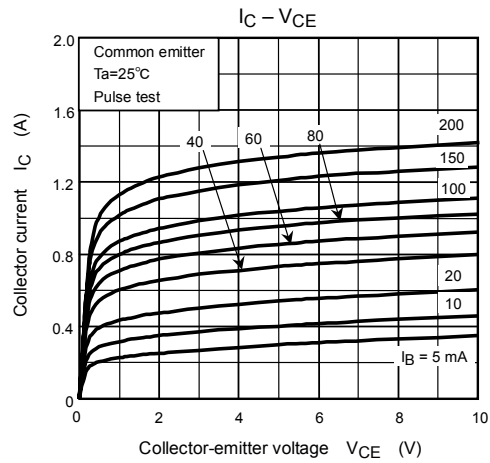
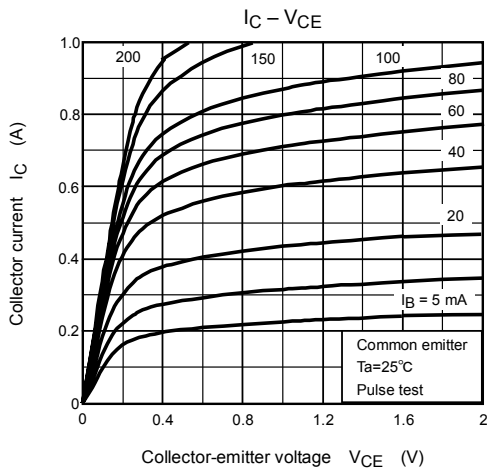
Weight: g (typ.)

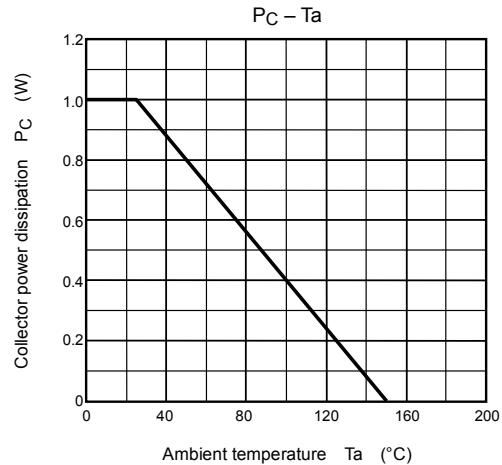
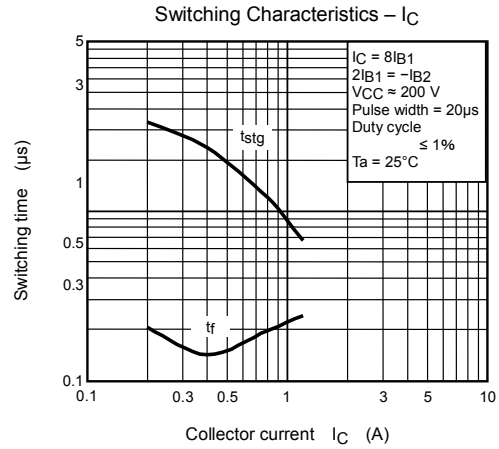
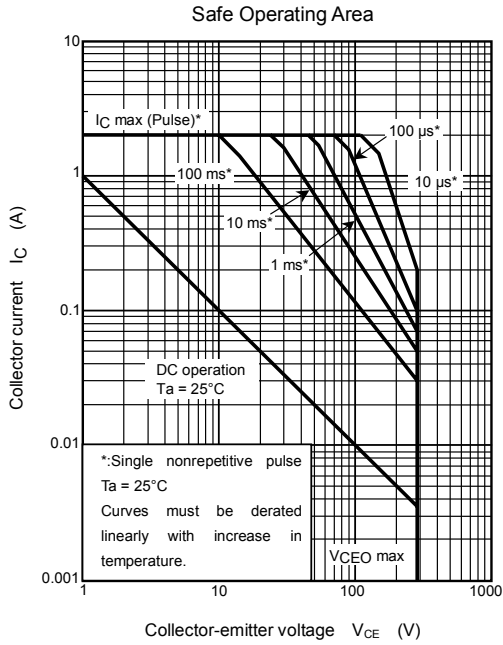
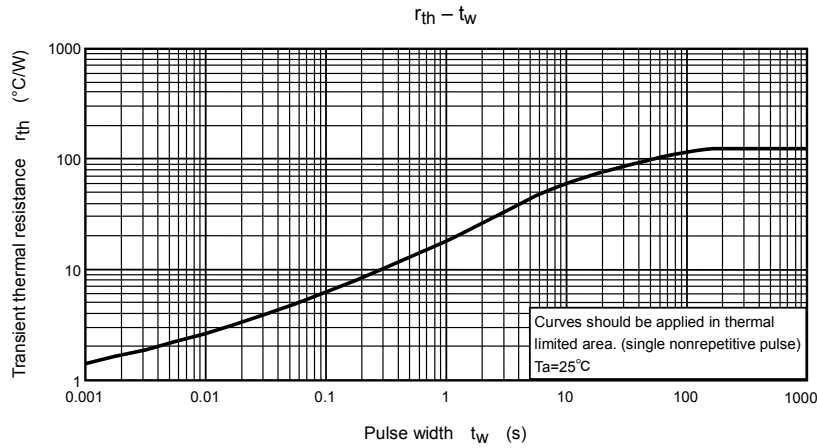
Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = 600\text{ V}, I_E = 0$	—	—	100	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = 8\text{ V}, I_C = 0$	—	—	100	μA
Collector-base breakdown voltage		$V_{(BR)CBO}$	$I_C = 1\text{ mA}, I_B = 0$	600	—	—	V
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	285	—	—	V
DC current gain		$h_{FE(1)}$	$V_{CE} = 5\text{ V}, I_C = 1\text{ mA}$	80	—	200	
		$h_{FE(2)}$	$V_{CE} = 5\text{ V}, I_C = 0.1\text{ A}$	100	—	200	
		$h_{FE(3)}$	$V_{CE} = 5\text{ V}, I_C = 0.2\text{ A}$	60	—	—	
Collector emitter saturation voltage		$V_{CE(sat)}$	$I_C = 0.6\text{ A}, I_B = 75\text{ mA}$	—	—	1.0	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = 0.6\text{ A}, I_B = 75\text{ mA}$	—	—	1.3	V
Switching time	Rise time	t_r	<p> $20\ \mu\text{s}$ $V_{CC} \approx 200\text{ V}$ $667\ \Omega$ I_{B1} I_{B2} I_{B21} I_C INPUT OUTPUT </p>	—	—	0.4	μs
	Storage time	t_{stg}		—	—	3.0	
	Fall time	t_f		$I_{B1} = 20\text{ mA}, -I_{B2} = 50\text{ mA}$ $\text{DUTY CYCLE} \leq 1\%$	—	—	

Marking







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