

2SC5352

Switching Regulator and High-Voltage Switching Applications

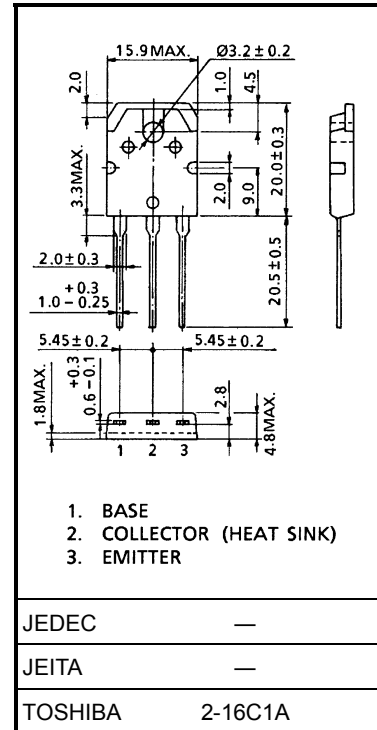
High-Speed DC-DC Converter Applications

Unit: mm

- Excellent switching times: $t_r = 0.5 \mu s$ (max), $t_f = 0.3 \mu s$ (max)
($I_C = 4 A$)
- High breakdown voltage: $V_{CEO} = 400 V$

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

Characteristics		Symbol	Rating	Unit
Collector-base voltage		V_{CBO}	600	V
Collector-emitter voltage		V_{CEO}	400	V
Emitter-base voltage		V_{EBO}	7	V
Collector current	DC	I_C	10	A
	Pulse	I_{CP}	15	
Base current		I_B	5	A
Collector power dissipation ($T_c = 25^\circ C$)		P_C	80	W
Junction temperature		T_j	150	$^\circ C$
Storage temperature range		T_{stg}	-55 to 150	$^\circ C$



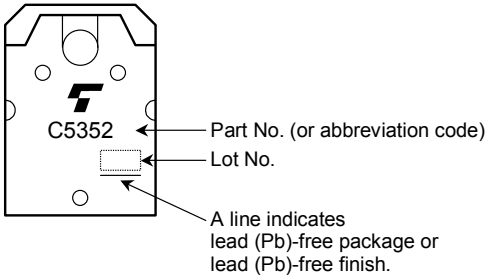
Weight: 4.7 g (typ.)

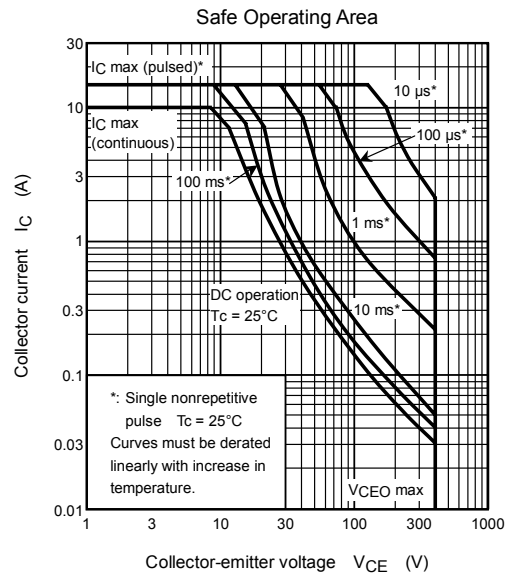
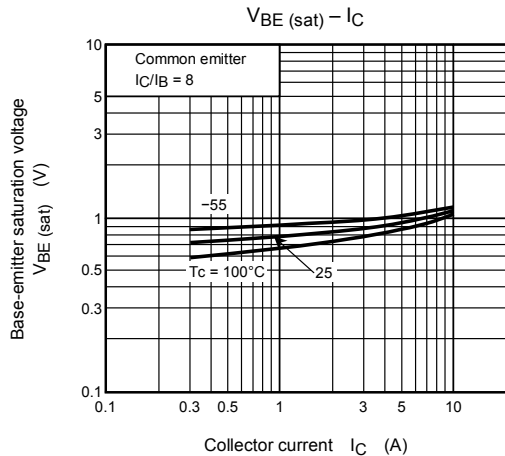
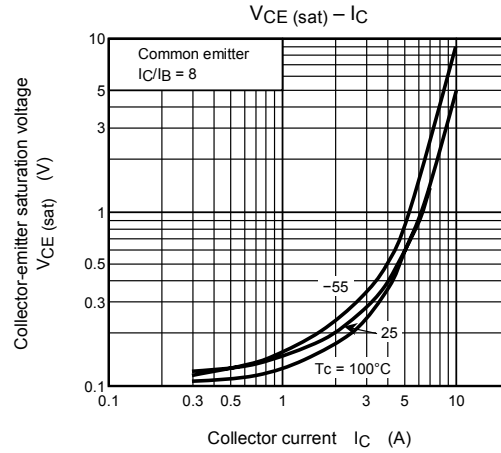
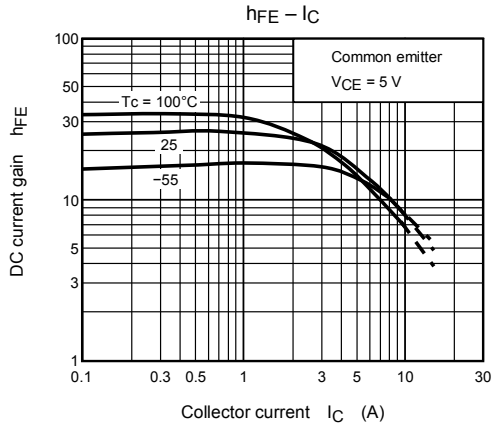
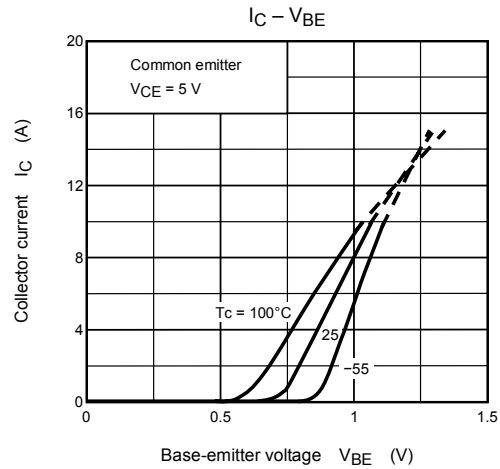
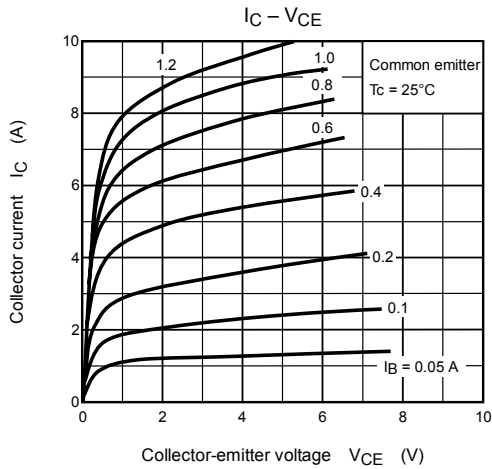
Electrical Characteristics ($T_c = 25^\circ C$)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current		I_{CBO}	$V_{CB} = 480 V, I_E = 0$	—	—	100	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = 7 V, I_C = 0$	—	—	1	mA
Collector-base breakdown voltage		$V_{(BR)CBO}$	$I_C = 1 mA, I_E = 0$	600	—	—	V
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C = 10 mA, I_B = 0$	400	—	—	V
DC current gain		h_{FE}	$V_{CE} = 5 V, I_C = 1 A$	20	—	—	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 4 A, I_B = 0.5 A$	—	—	1.0	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = 4 A, I_B = 0.5 A$	—	—	1.3	V
Switching time	Rise time	t_r	<p>$V_{CC} \approx 200 V$ 50Ω $20 \mu s$ I_C I_{B1} Input I_{B2} Output</p>	—	—	0.5	μs
	Storage time	t_{stg}		—	—	2.0	
	Fall time	t_f		—	—	0.3	

$I_{B1} = 0.5 A, I_{B2} = -1 A, \text{duty cycle} \leq 1\%$

Marking





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