



2SC5353B

NPN SILICON TRANSISTOR

HIGH VOLTAGE NPN TRANSISTOR

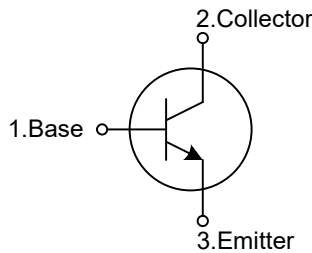
DESCRIPTION

Switching Regulator and High Voltage Switching Applications
High-Speed DC-DC Converter Applications.

FEATURES

- * Excellent switching times: $t_R = 0.7\mu s_{(MAX)}$, $t_F = 0.5\mu s_{(MAX)}$
- * High collectors breakdown voltage: $V_{CEO} = 700V$

SYMBOL

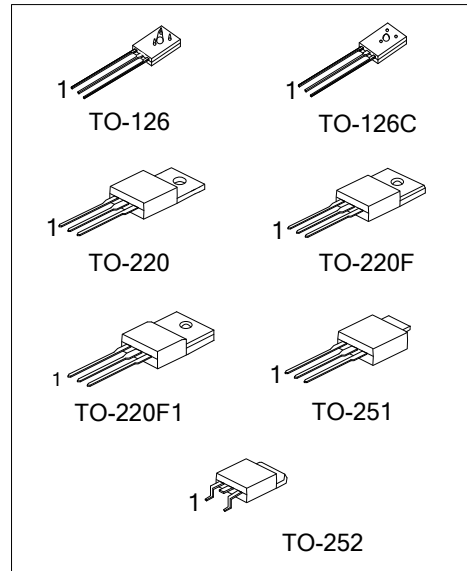


ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC5353BL-TA3-T	2SC5353BG-TA3-T	TO-220	B	C	E	Tube
2SC5353BL-TF3-T	2SC5353BG-TF3-T	TO-220F	B	C	E	Tube
2SC5353BL-TF1-T	2SC5353BG-TF1-T	TO-220F1	B	C	E	Tube
2SC5353BL-TM3-T	2SC5353BG-TM3-T	TO-251	B	C	E	Tube
2SC5353BL-TN3-R	2SC5353BG-TN3-R	TO-252	B	C	E	Tape Reel
2SC5353BL-T60-K	2SC5353BG-T60-K	TO-126	B	C	E	Bulk
2SC5353BL-T60-A-K	2SC5353BG-T60-A-K	TO-126	E	C	B	Bulk
2SC5353BL-T6C-K	2SC5353BG-T6C-K	TO-126C	B	C	E	Bulk

Note: Pin Assignment: B: Base C: Collector E: Emitter

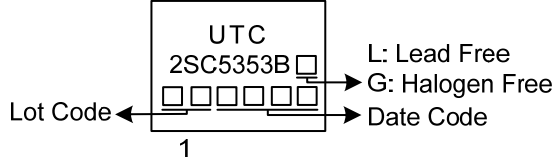
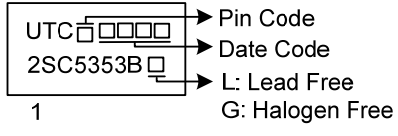
<p>2SC5353BG-T60-A-K</p> <p>(1)Packing Type (2)Pin Assignment (3)Package Type (4)Green Package</p>	<p>(1) K: Bulk, T: Tube, R: Tape Reel (2) refer to Pin Assignment (3) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1, TM3: TO-251, TN3: TO-252, T60: TO-126, T6C: TO-126C (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING

TO-220 / TO-220F TO-220F1 / TO-251 / TO-252	TO-126 / TO-126C
 <p>UTC 2SC5353B 1</p> <p>Lot Code</p> <p>L: Lead Free G: Halogen Free Date Code</p>	 <p>UTC 2SC5353B 1</p> <p>Pin Code Date Code L: Lead Free G: Halogen Free</p>

■ ABSOLUTE MAXIMUM RATINGS (T_C=25°C unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V _{CB0}	900	V
Collector-Emitter Voltage		V _{CEO}	700	V
Emitter-Base Voltage		V _{EBO}	7	V
Collector Current	DC	I _C	3	A
	Pulse	I _{CP}	5	A
Base Current		I _B	1	A
Power Dissipation	TO-126/TO-126C TO-220F/TO-220F1	P _D	20	W
	TO-220		25	W
	TO-251/TO-252		22	W
Junction Temperature		T _J	+150	°C
Storage Temperature		T _{STG}	-40 ~ +150	°C

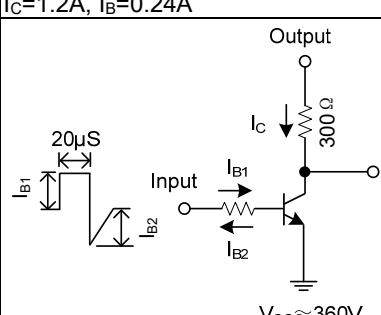
Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

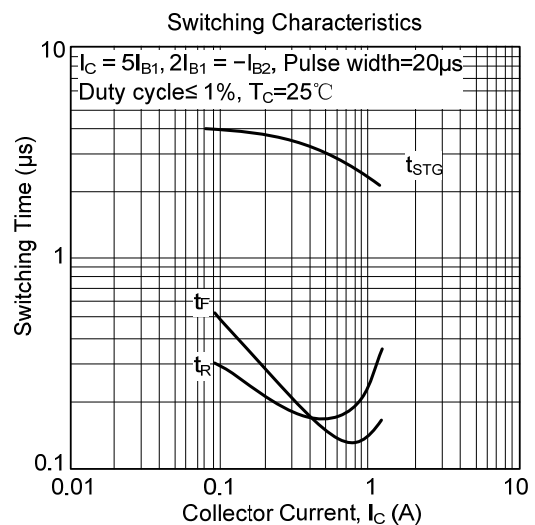
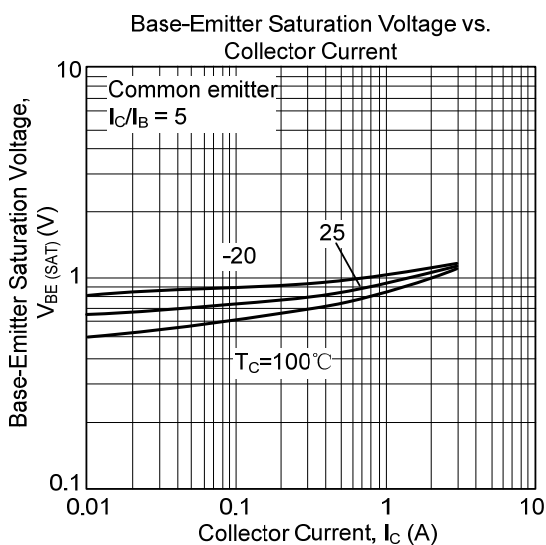
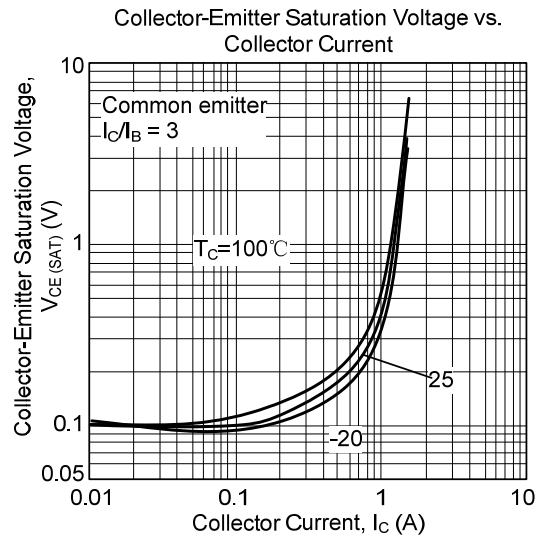
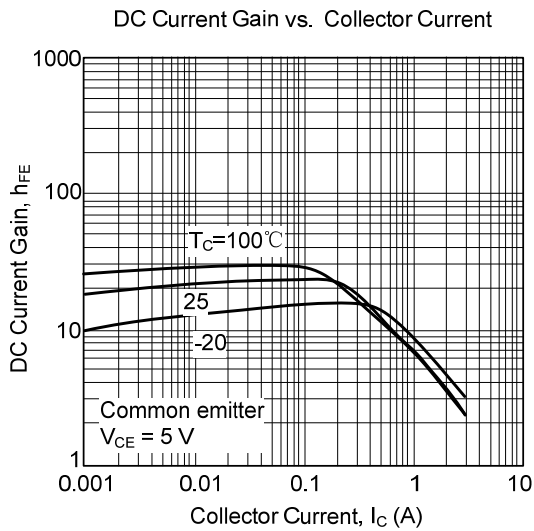
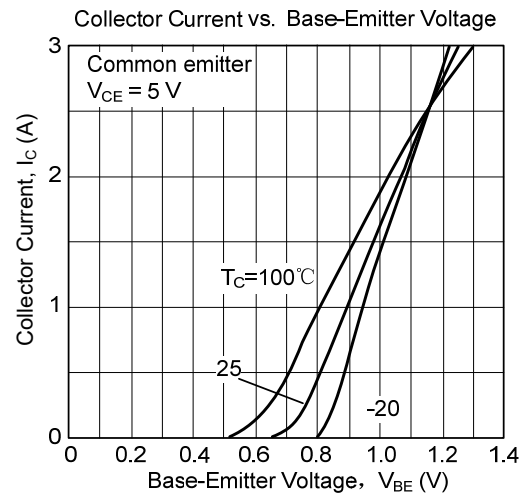
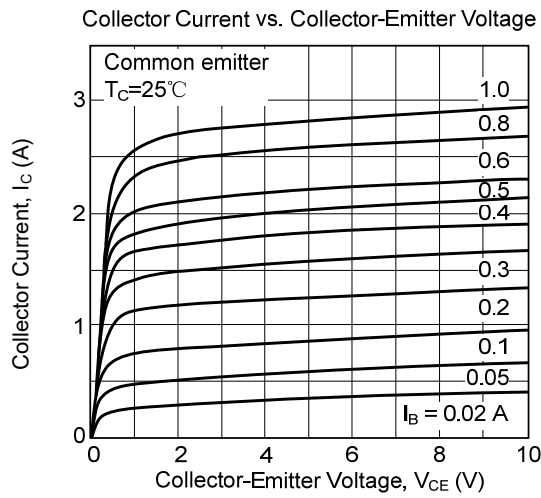
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-126/TO-126C	θ _{JA}	89.3 (Note)	°C/W
	TO-220F/TO-220F1		62.5	°C/W
	TO-220			°C/W
	TO-251/TO-252		80.1 (Note)	°C/W
Junction to Case	TO-126/TO-126C	θ _{JC}	6.25 (Note)	°C/W
	TO-220F/TO-220F1		6.25	°C/W
	TO-220		5	°C/W
	TO-251/TO-252		5.68 (Note)	°C/W

Note: Device mounted on FR-4 substrate P_c board, 2oz copper, with 1inch square copper plate.

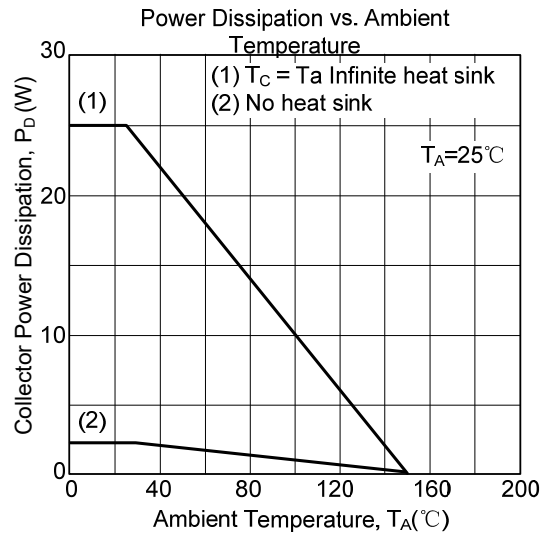
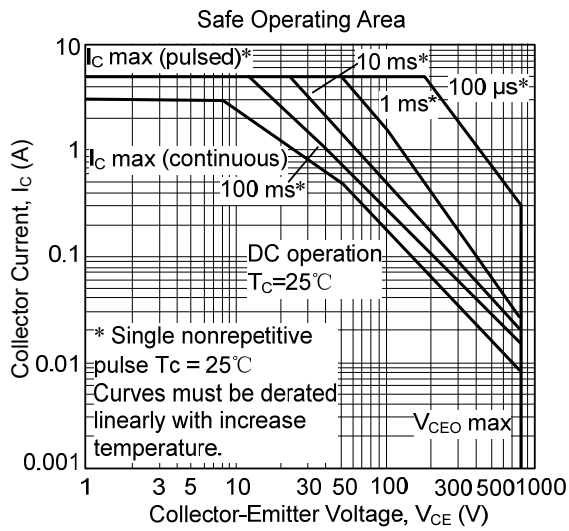
■ ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Collector-Base Breakdown Voltage		BV _{CB0}	I _C =1mA, I _E =0	900			V	
Collector-Emitter Breakdown Voltage		BV _{CEO}	I _C =10mA, I _B =0	700			V	
Emitter to Base Breakdown Voltage		BV _{EBO}	I _E =100μA, I _C =0	7			V	
Collector Cut-off Current		I _{CBO}	V _{CB} =720V, I _E =0			100	μA	
Collector Cutoff Current		I _{CEO}	V _{CE} =700V, I _B =0			100	μA	
Emitter Cut-off Current		I _{EBO}	V _{EB} =7V, I _C =0			10	μA	
DC Current Gain		h _{FE1}	V _{CE} =5V, I _C =1mA	10				
		h _{FE2}	V _{CE} =5V, I _C =0.15A	15				
Collector-Emitter Saturation Voltage		V _{CE(SAT)}	I _C =1.2A, I _B =0.24A			1.0	V	
Base-Emitter Saturation Voltage		V _{BE(SAT)}	I _C =1.2A, I _B =0.24A			1.3	V	
Switching Time	Rise Time	t _r				0.7	μS	
	Storage Time	t _{STG}					4.0	μS
	Fall Time	t _f		I _{B1} = 0.24 A, I _{B2} = -0.48 A, duty cycle ≤ 1%				0.5

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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