



## 2SC5353B

## NPN SILICON TRANSISTOR

### HIGH VOLTAGE NPN TRANSISTOR

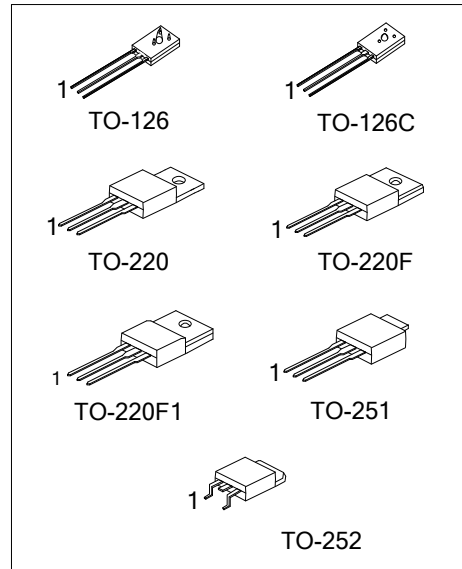
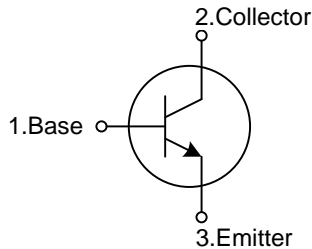
#### DESCRIPTION

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-T60-K	2SC5353BG-T60-K	TO-126	B	C	E	Bulk
2SC5353BL-T6C-K	2SC5353BG-T6C-K	TO-126C	B	C	E	Bulk
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

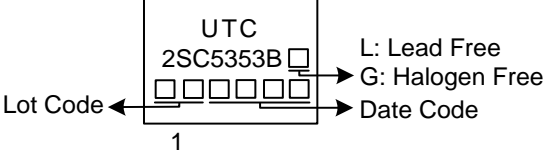
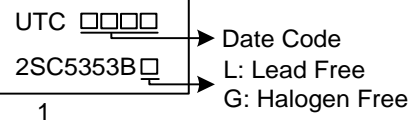
Note: Pin Assignment: B: Base C: Collector E: Emitter

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

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### ■ ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub>=25°C unless otherwise specified)

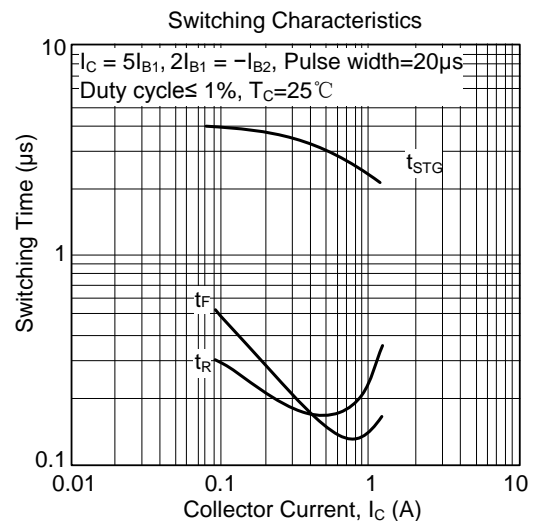
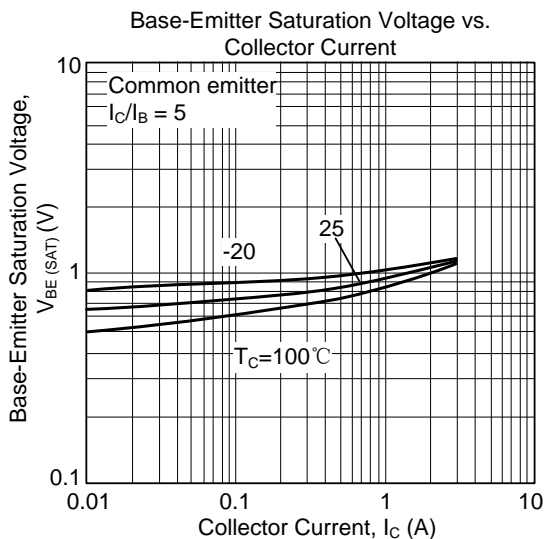
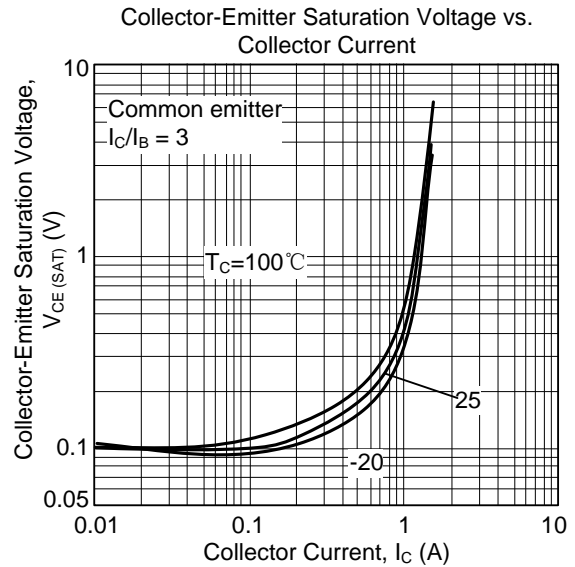
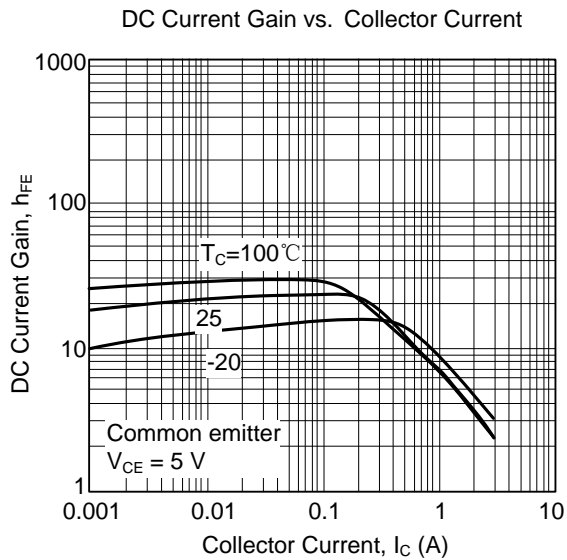
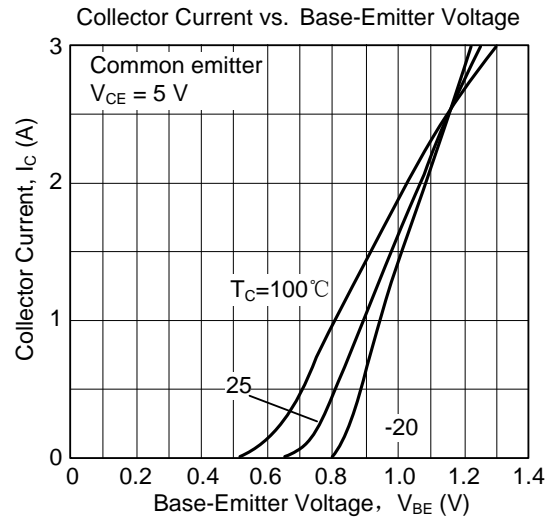
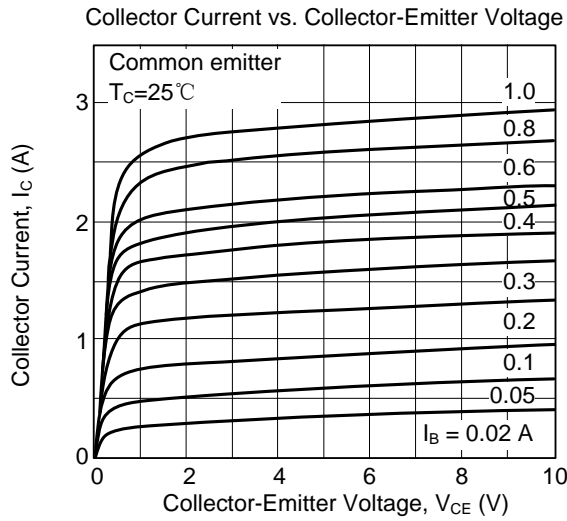
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V <sub>CBO</sub>	900	V
Collector-Emitter Voltage		V <sub>CEO</sub>	700	V
Emitter-Base Voltage		V <sub>EBO</sub>	7	V
Collector Current	DC	I <sub>C</sub>	3	A
	Pulse	I <sub>CP</sub>	5	A
Base Current		I <sub>B</sub>	1	A
Power Dissipation	TO-126/TO-126C	P <sub>D</sub>	20	W
	TO-220F/TO-220F1			
	TO-220		25	W
	TO-251/TO-252		22	W
Junction Temperature		T <sub>J</sub>	+150	°C
Storage Temperature		T <sub>STG</sub>	-40 ~ +150	°C

Note: 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.

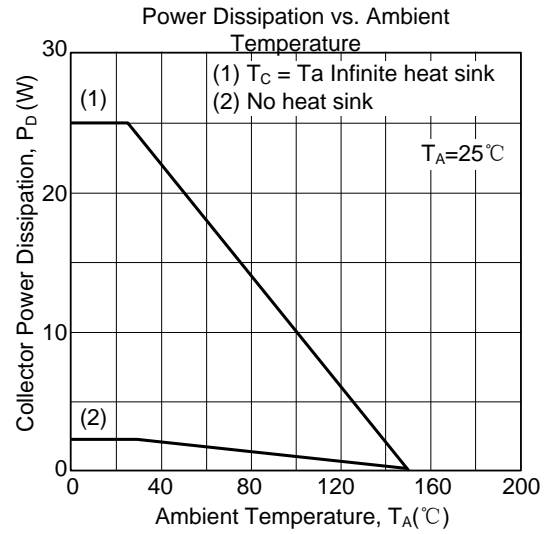
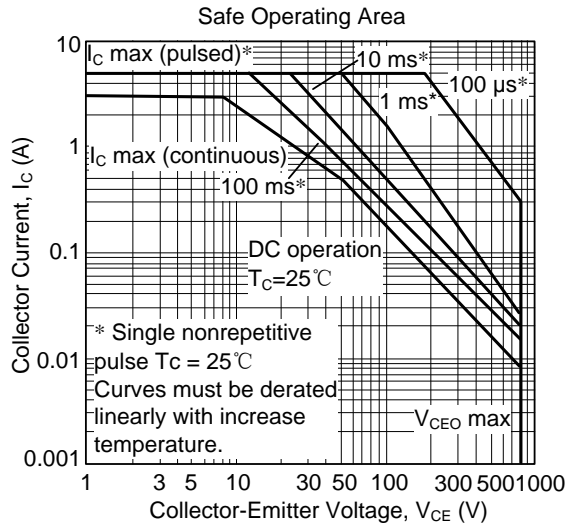
### ■ ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Collector-Base Breakdown Voltage		BV <sub>CBO</sub>	I <sub>C</sub> =1 mA, I <sub>E</sub> = 0	900			V	
Collector-Emitter Breakdown Voltage		BV <sub>CEO</sub>	I <sub>C</sub> =10 mA, I <sub>B</sub> = 0	700			V	
Collector Cut-off Current		I <sub>CBO</sub>	V <sub>CB</sub> =720V, I <sub>E</sub> = 0			100	μA	
Emitter Cut-off Current		I <sub>EBO</sub>	V <sub>EB</sub> =7V, I <sub>C</sub> = 0			10	μA	
DC Current Gain		h <sub>FE1</sub>	V <sub>CE</sub> =5 V, I <sub>C</sub> =1 mA	10				
		h <sub>FE2</sub>	V <sub>CE</sub> =5 V, I <sub>C</sub> =0.15 A	15				
Collector-Emitter Saturation Voltage		V <sub>CE(SAT)</sub>	I <sub>C</sub> =1.2 A, I <sub>B</sub> =0.24 A			1.0	V	
Base-Emitter Saturation Voltage		V <sub>BE(SAT)</sub>	I <sub>C</sub> =1.2 A, I <sub>B</sub> =0.24 A			1.3	V	
Switching Time	Rise Time	t <sub>R</sub>				0.7	μS	
	Storage Time	t <sub>STG</sub>					4.0	μS
	Fall Time	t <sub>F</sub>						0.5

## TYPICAL CHARACTERISTICS



## ■ TYPICAL CHARACTERISTICS (Cont.)



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