



# 2SC5353

## NPN SILICON TRANSISTOR

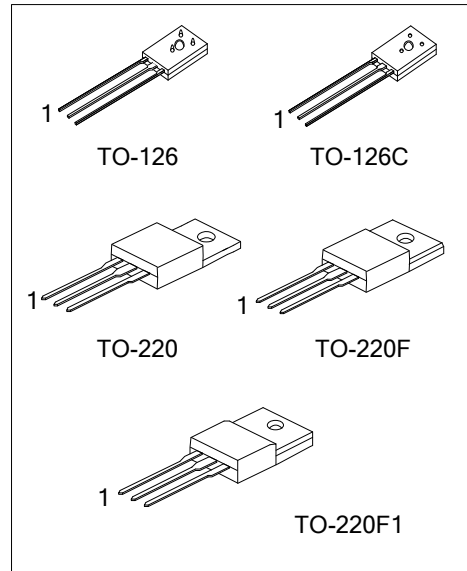
### HIGH VOLTAGE NPN TRANSISTOR

■ **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:  $V_{CEO} = 700V$



■ **ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC5353L-T60-K	2SC5353G-T60-K	TO-126	B	C	E	Bulk
2SC5353L-T6C-K	2SC5353G-T6C-K	TO-126C	B	C	E	Bulk
2SC5353L-TA3-T	2SC5353G-TA3-T	TO-220	B	C	E	Tube
2SC5353L-TF1-T	2SC5353G-TF1-T	TO-220F1	B	C	E	Tube
2SC5353L-TF3-T	2SC5353G-TF3-T	TO-220F	B	C	E	Tube

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

<p>2SC5353G-T60-K</p>	<p>(1) K: Bulk, T: Tube (2) T60: TO-126, T6C: TO-126C, TA3: TO-220, TF3: TO-220F, TF1: TO-220F1 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ **MARKING**

TO-126 / TO-126C	TO-220 / TO-220F / TO-220F1

■ ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub>=25°C)

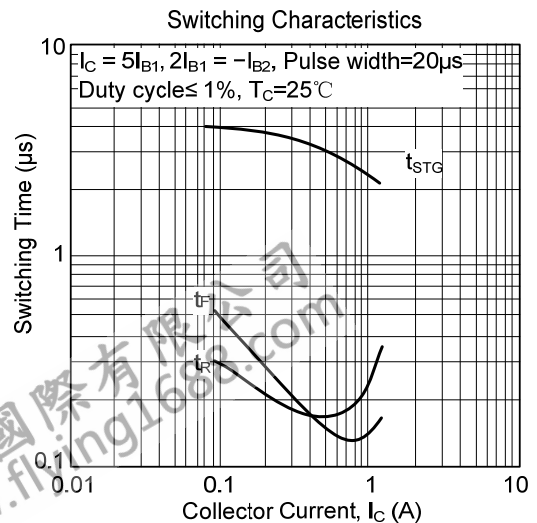
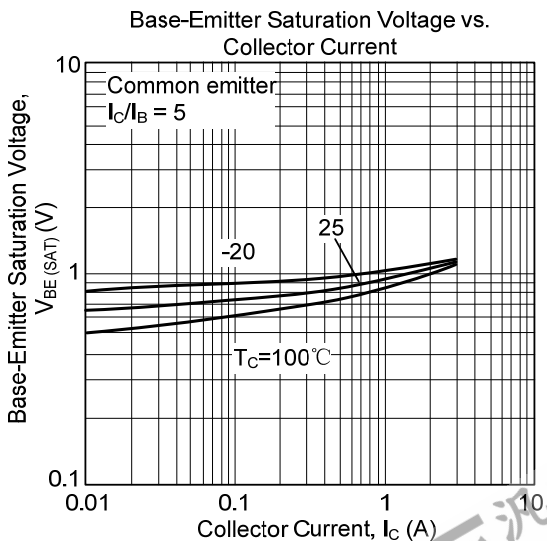
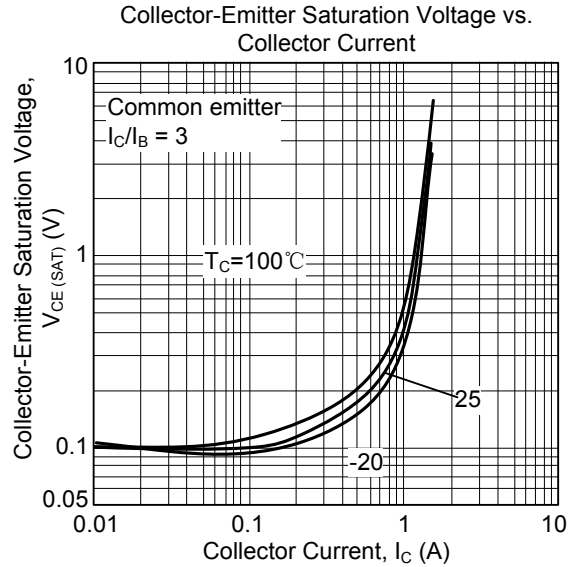
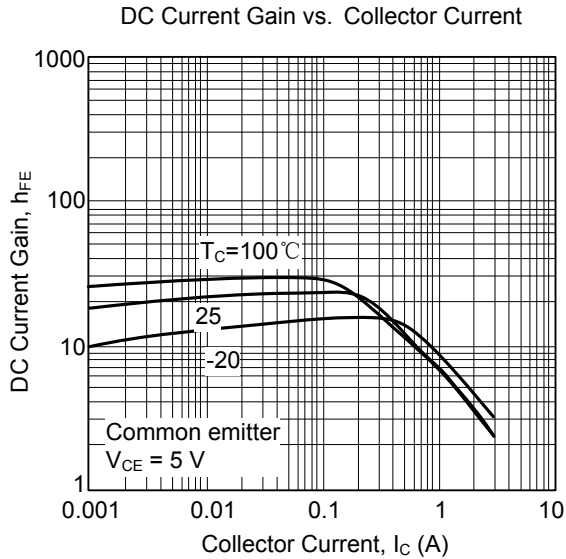
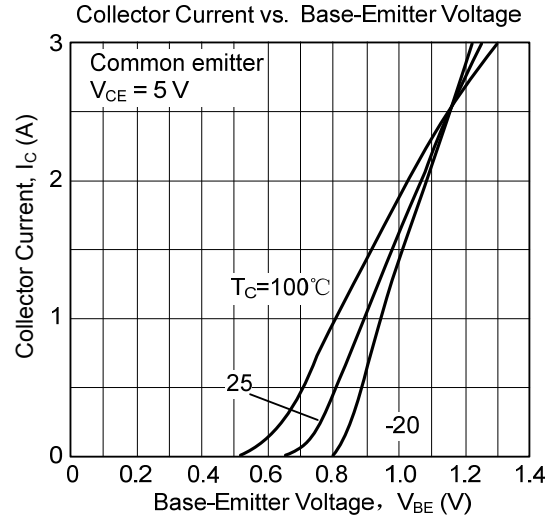
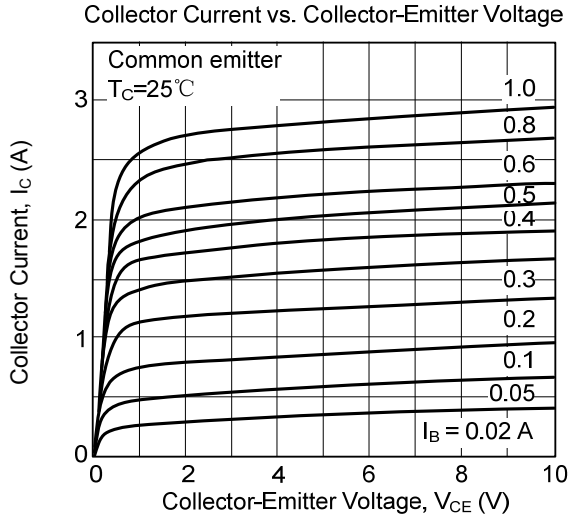
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V <sub>CBO</sub>	900	V
Collector-Emitter Voltage		V <sub>CEO</sub>	700	V
Emitter-Base Voltage		V <sub>EBO</sub>	7	V
Collector Current	DC	I <sub>C</sub>	3	A
	Pulse	I <sub>CP</sub>	5	
Base Current		I <sub>B</sub>	1	A
Collector Power Dissipation	TO-220F/ TO-220F1	P <sub>D</sub>	20	W
	TO-126/TO-126C			
	TO-220		25	
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.

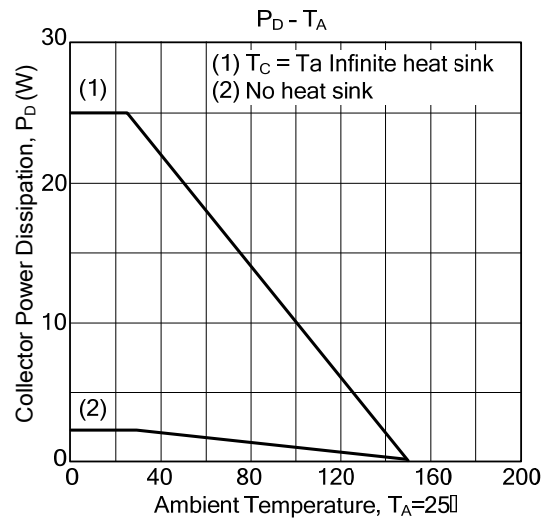
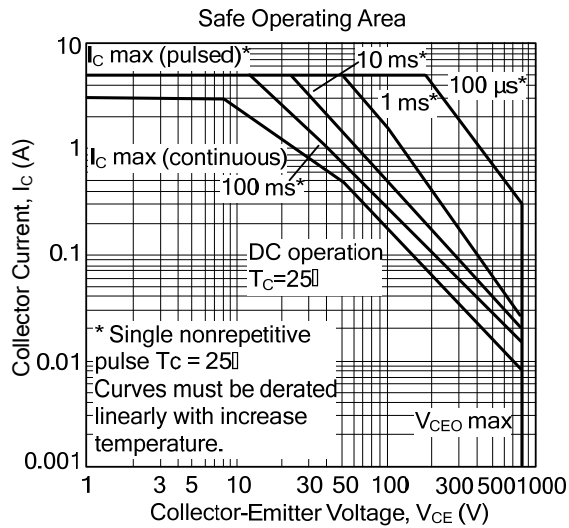
■ ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C)

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	
	Fall Time	t <sub>f</sub>		I <sub>B1</sub> = 0.24 A, I <sub>B2</sub> = -0.48 A, duty cycle ≤ 1%			
Collector Output Capacitance		C <sub>ob</sub>	V <sub>CB</sub> = 0V, f=1MHz		86		pF
			V <sub>CB</sub> = 10V, f=1MHz		23.5		pF

■ TYPICAL CHARACTERISTICS



### ■ TYPICAL CHARACTERISTICS(Cont.)



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