

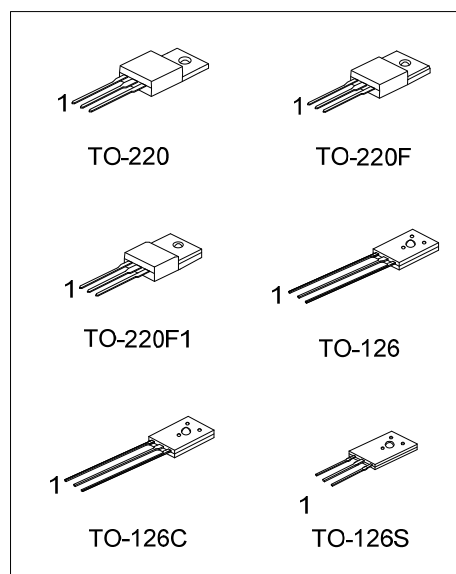
**2SC5353****NPN SILICON TRANSISTOR****HIGH VOLTAGE NPN
TRANSISTOR****DESCRIPTION**

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: $V_{CE0} = 750V$

**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
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
2SC5353L-T60-K	2SC5353G-T60-K	TO-126	B	C	E	Bulk
2SC5353L-T6C-T	2SC5353G-T6C-T	TO-126C	B	C	E	Tube
2SC5353L-T6C-K	2SC5353G-T6C-K	TO-126C	B	C	E	Bulk
2SC5353L-T6S-K	2SC5353G-T6S-K	TO-126S	B	C	E	Bulk

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

2SC5353G-TA3-T (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube, K: Bulk (2) TA3: TO-220, TF3: TO-220F, TF1: TO-220F1 T60: TO-126, T6C: TO-126C, T6S: TO-126S (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

TO-220 / TO-220F / TO-220F1	TO-126 / TO-126C / TO-126S
UTC 2SC5353 Lot Code → L: Lead Free G: Halogen Free Date Code	UTC 2SC5353 Date Code L: Lead Free G: Halogen Free

■ ABSOLUTE MAXIMUM RATINGS ($T_C=25^{\circ}\text{C}$ unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	900	V
Collector-Emitter Voltage		V_{CEO}	750	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
Collector Power Dissipation	TO-220	P_D	25	W
	TO-220F/ TO-220F1		20	W
	TO-126/TO-126C			
	TO-126S			
Junction Temperature		T_J	+150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

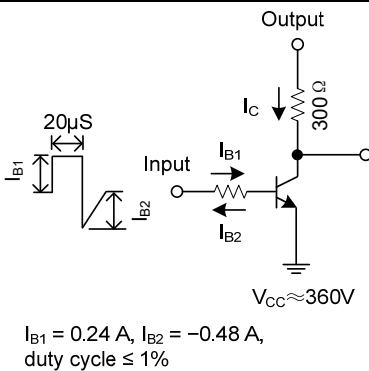
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

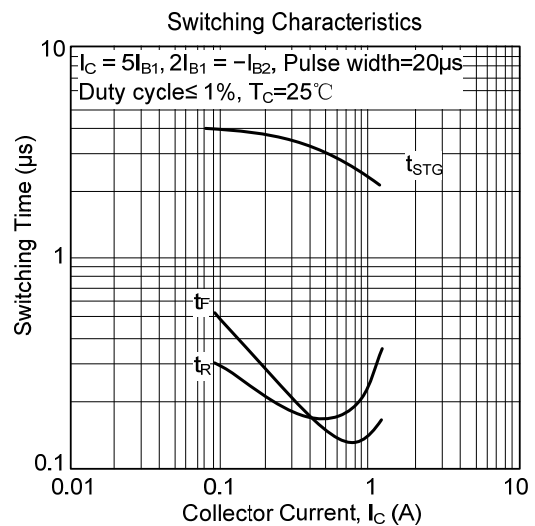
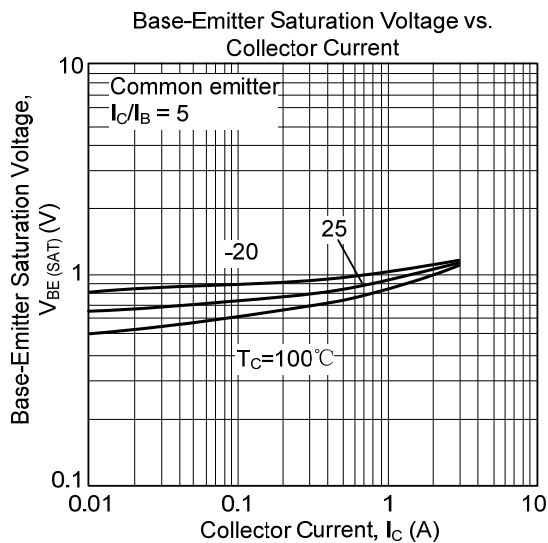
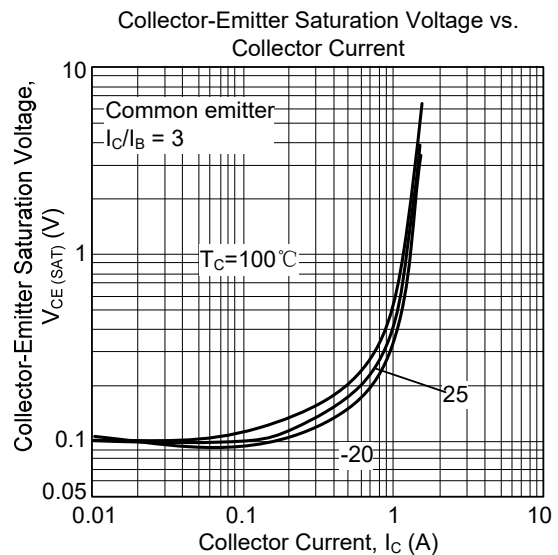
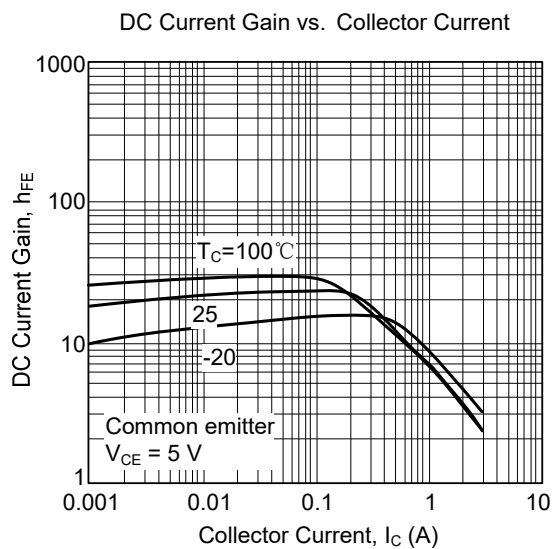
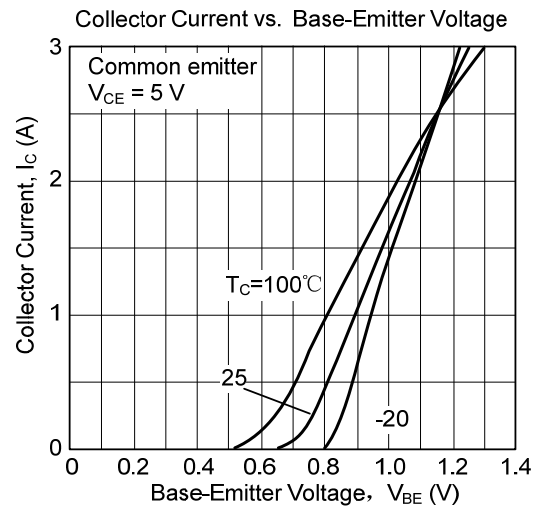
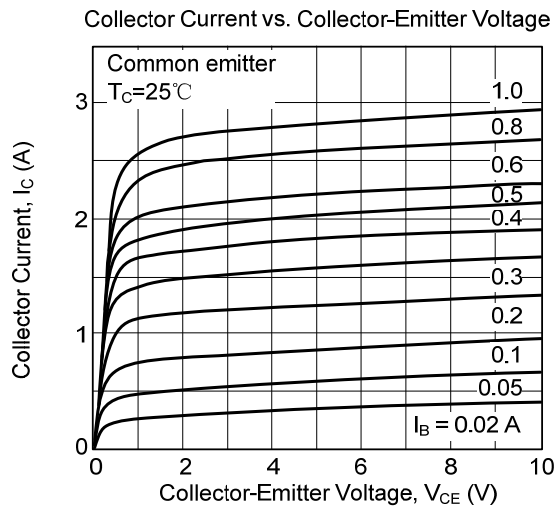
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-220/TO-220F TO-220F1	θ_{JA}	62.5	$^{\circ}\text{C/W}$
	TO-126/TO-126C TO-126S		89.3 (Note)	$^{\circ}\text{C/W}$
Junction to Case	TO-220	θ_{JC}	5	$^{\circ}\text{C/W}$
	TO-220F/TO-220F1		6.25	$^{\circ}\text{C/W}$
	TO-126/TO-126C		6.25 (Note)	$^{\circ}\text{C/W}$
	TO-126S			

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

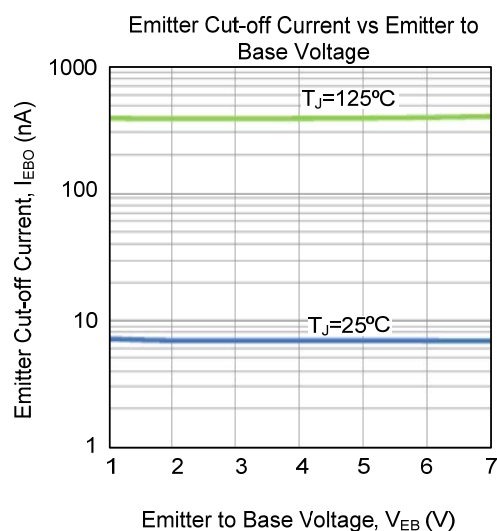
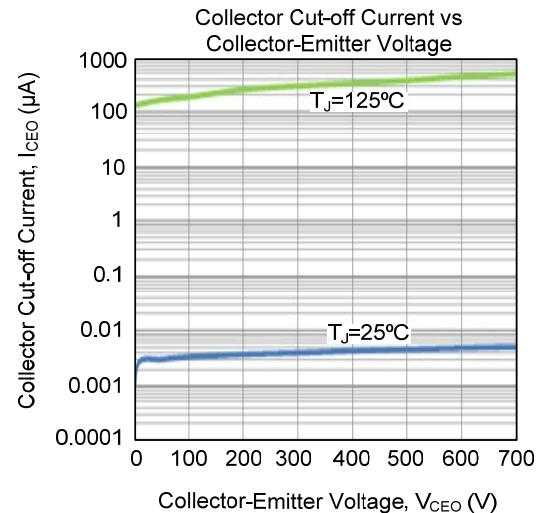
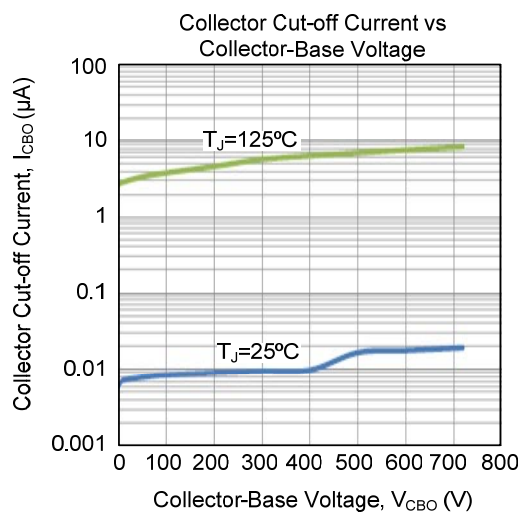
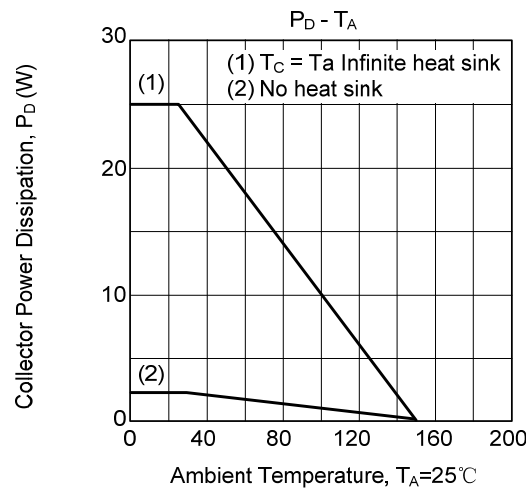
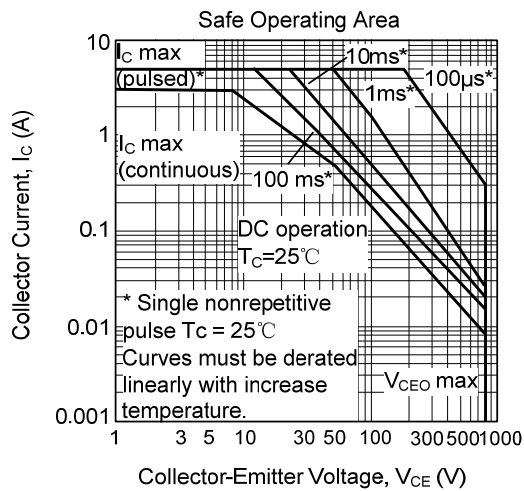
■ ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$ unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage		BV_{CBO}	$I_C=1\text{mA}$, $I_E=0$	900			V
Collector-Emitter Breakdown Voltage		BV_{CEO}	$I_C=10\text{mA}$, $I_B=0$	750			V
Collector Cut-off Current		I_{CBO}	$V_{CB}=720\text{V}$, $I_E=0$			10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=7\text{V}$, $I_C=0$			1	μA
DC Current Gain		h_{FE1}	$V_{CE}=5\text{V}$, $I_C=1\text{mA}$	10			
		h_{FE2}	$V_{CE}=5\text{V}$, $I_C=0.15\text{A}$	15			
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	$I_C=1.2\text{A}$, $I_B=0.24\text{A}$			1.0	V
Base-Emitter Saturation Voltage		$V_{BE(SAT)}$	$I_C=1.2\text{A}$, $I_B=0.24\text{A}$			1.3	V
Switching Time	Rise Time	t_r				0.7	μs
	Storage Time	t_{STG}				4.0	μs
	Fall Time	t_f				0.5	μs
Collector Output Capacitance		C_{ob}	$V_{CB}=0\text{V}$, $f=1\text{MHz}$		86		pF
			$V_{CB}=10\text{V}$, $f=1\text{MHz}$		23.5		pF

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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