



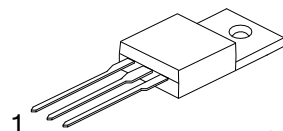
2SC4027

NPN SILICON TRANSISTOR

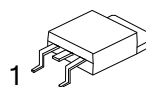
HIGH-VOLTAGE SWITCHING APPLICATIONS

■ FEATURES

- * High voltage and large current capacity.
- * Fast switching time.



TO-220

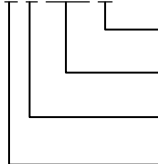


TO-252

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC4027L-x-TA3-T	2SC4027G-x-TA3-T	TO-220	B	C	E	Tube
2SC4027L-x-TN3-R	2SC4027G-x-TN3-R	TO-252	B	C	E	Tape Reel

2SC4027L-x-TA3-T



- (1) Packing Type
- (2) Package Type
- (3) Rank
- (4) Lead Free

(1) T: Tube, R: Tape Reel

(2) TA3: TO-220, TN3: TO-252

(3) x: refer to Classification of h_{FE1}

(4) G: Halogen Free, L: Lead Free

■ **ABSOLUTE MAXIMUM RATING** ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER			SYMBOL	RATINGS	UNIT
Collector to Base Voltage			V _{CBO}	180	V
Collector to Emitter Voltage			V _{CEO}	160	V
Emitter to Base Voltage			V _{EBO}	6	V
Collector Current			I _C	1.5	A
Collector Current (Pulse)			I _{CP}	2.5	A
Collector Dissipation	T _A =25°C	TO-220	P _C	2	W
		TO-252		1	
	T _C =25°C	TO-220		65	W
		TO-252		15	
Junction Temperature			T _J	150	°C
Storage Temperature			T _{STG}	-55 ~+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.

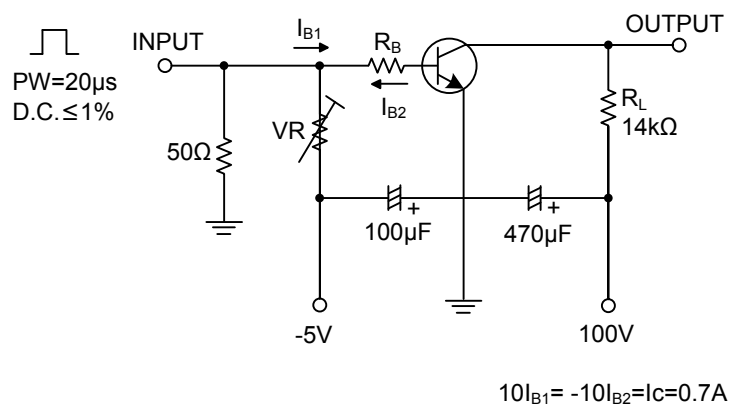
■ **ELECTRICAL CHARACTERISTICS** ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=10\text{A}$, $I_E=0$	180			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=1\text{mA}$, $R_{BE}=\infty$	160			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu\text{A}$, $I_C=0$	6			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$		0.13	0.45	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$		0.85	1.2	V
Collector Cutoff Current	I_{CBO}	$V_{CB}=120\text{V}$, $I_E=0$			1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}$, $I_C=0$			1.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=5\text{V}$, $I_C=100\text{mA}$	100		400	
	h_{FE2}	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$	80			
Gain-Bandwidth Product	f_T	$V_{CE}=10\text{V}$, $I_C=50\text{mA}$		120		MHz
Output Capacitance	C_{OB}	$V_{CB}=-10\text{V}$, $f=1\text{MHz}$		12		pF
Turn-On Time	T_{ON}	See specified Test Circuit		60		μs
Storage Time	T_{STG}			1.2		μs
Fall Time	t_F			80		μs

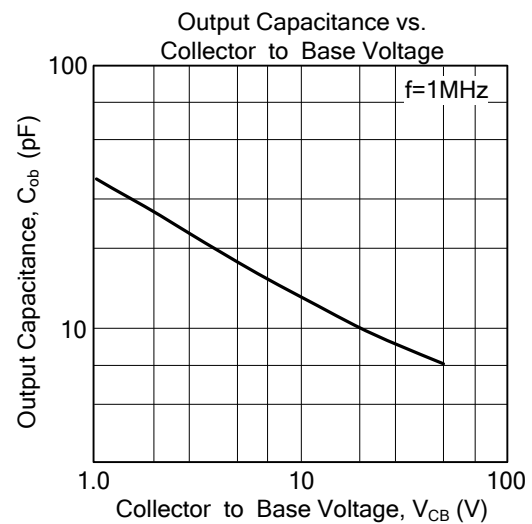
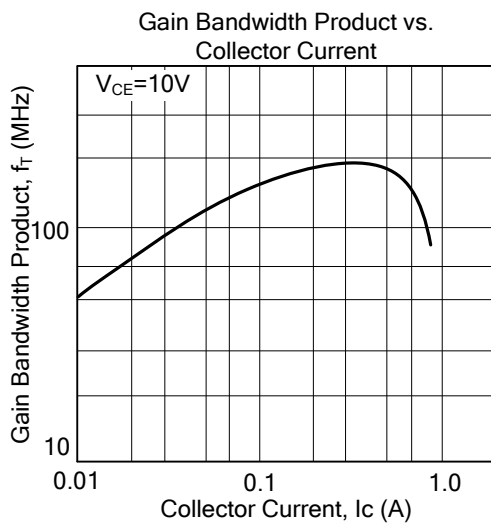
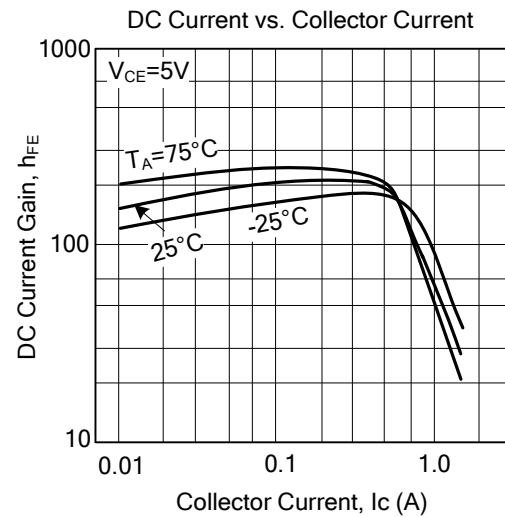
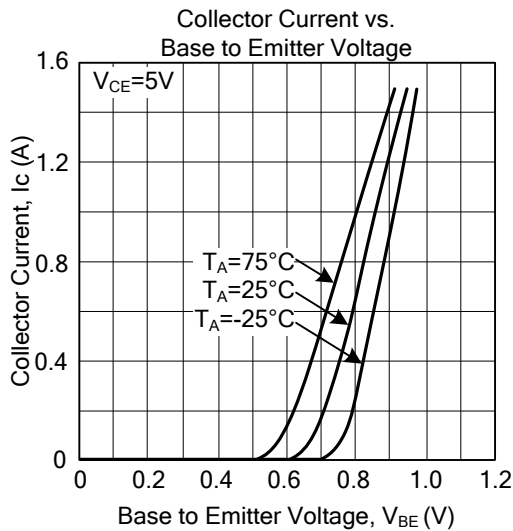
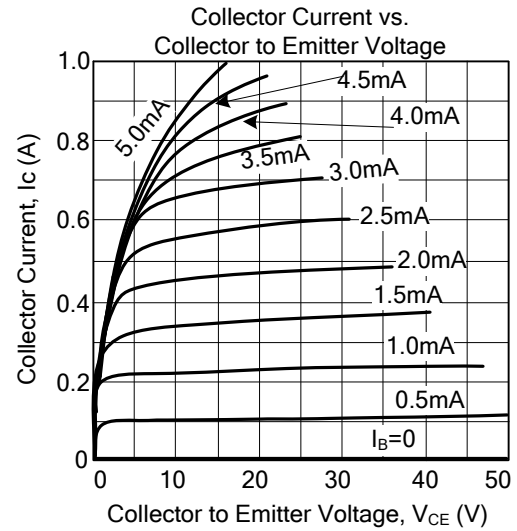
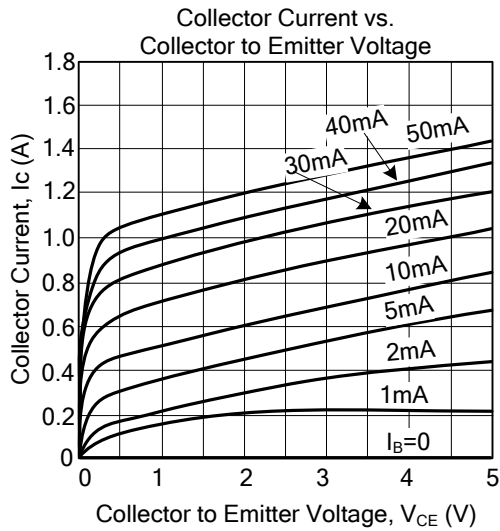
■ **CLASSIFICATION OF h_{FE1}**

RANK	R	S	T
RANGE	100~200	140~280	200~400

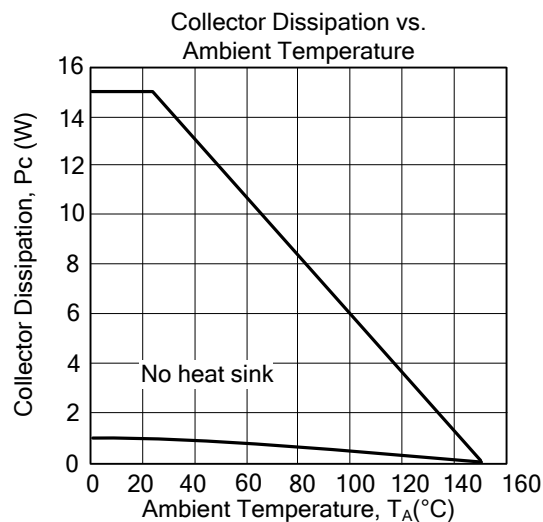
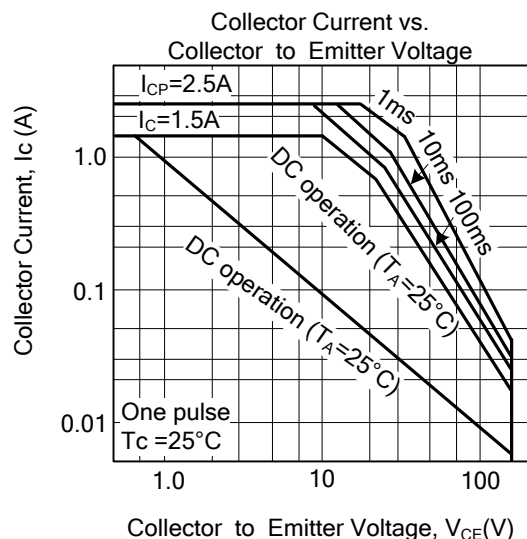
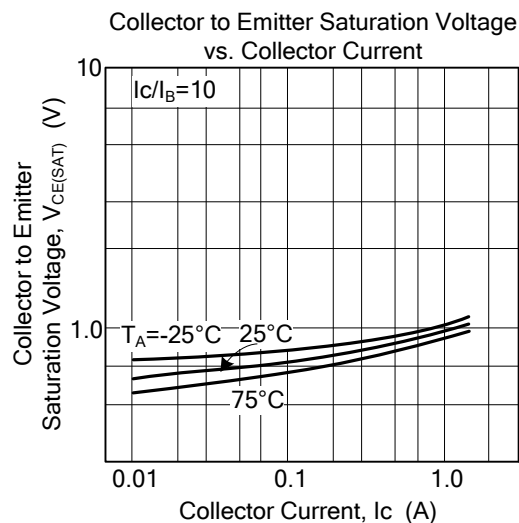
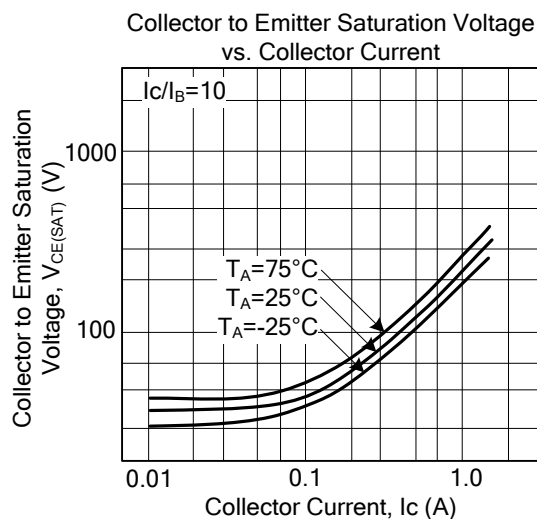
■ SWITCHING TIME TEST CIRCUIT



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.