



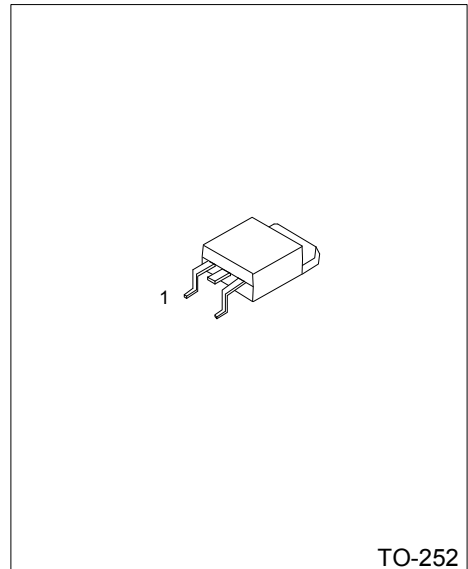
2SC4027

NPN SILICON TRANSISTOR

HIGH-VOLTAGE SWITCHING APPLICATIONS

■ FEATURES

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



TO-252

Lead-free: 2SC4027L
 Halogen-free: 2SC4027G

■ ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
2SC4027-x-TN3-R	2SC4027L-x-TN3-R	2SC4027G-x-TN3-R	TO-252	B	C	E	Tape Reel

<p>2SC4027L-x-TN3-R</p>	<p>(1) R: Tape Reel (2) TN3: TO-252 (3) x: refer to Classification of h_{FE1} (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	V _{CB0}	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	Ta=25°C	1	W
	Tc=25°C	15	W
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.

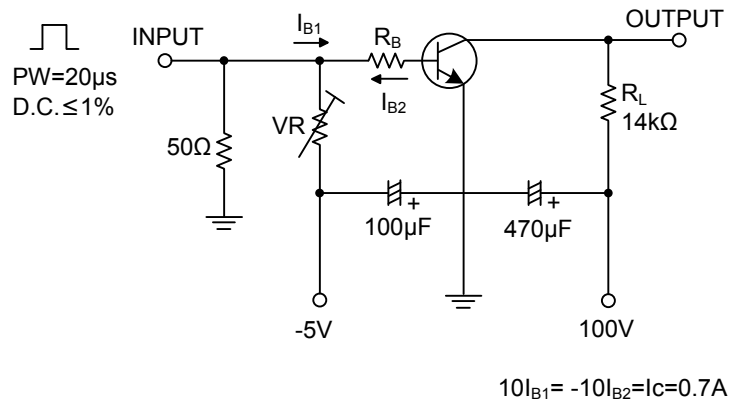
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV _{CB0}	I _C =10A, I _E =0	180			V
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C =1mA, R _{BE} =∞	160			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E =10μA, I _C =0	6			V
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C =500mA, I _B =50mA		0.13	0.45	V
Base-Emitter Saturation Voltage	V _{BE(SAT)}	I _C =500mA, I _B =50mA		0.85	1.2	V
Collector Cutoff Current	I _{CB0}	V _{CB} =120V, I _E =0			1.0	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0			1.0	μA
DC Current Gain	h _{FE1}	V _{CE} =5V, I _C =100mA	100		400	
	h _{FE2}	V _{CE} =5V, I _C =10mA	80			
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =50mA		120		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		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

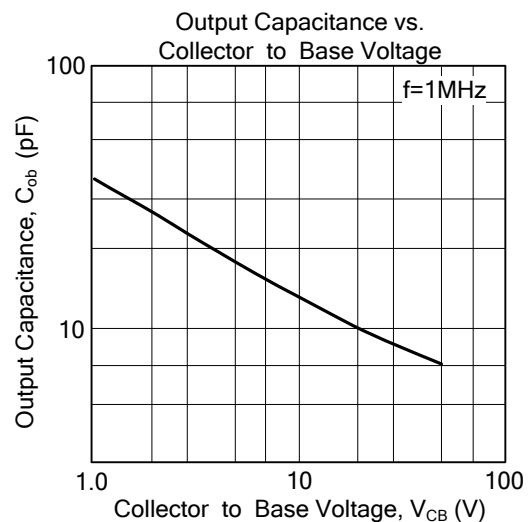
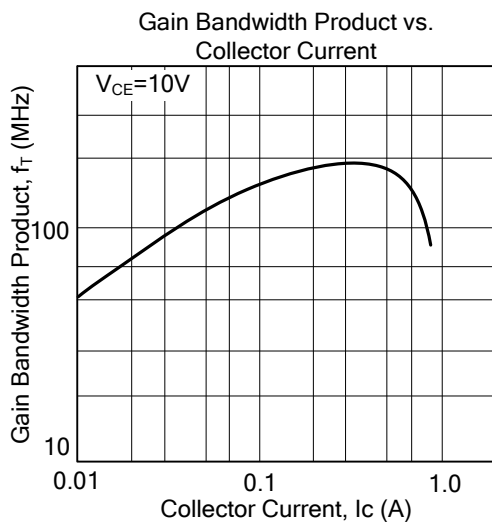
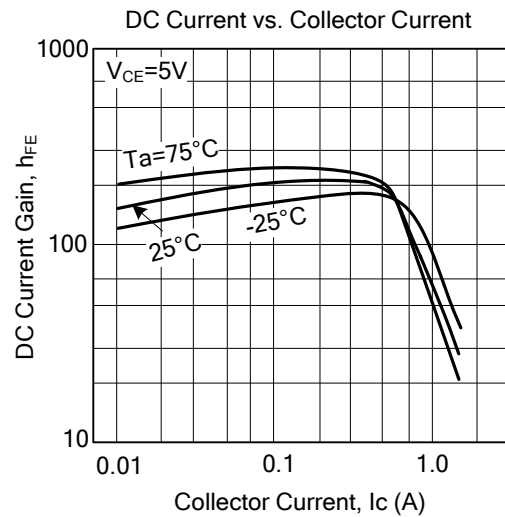
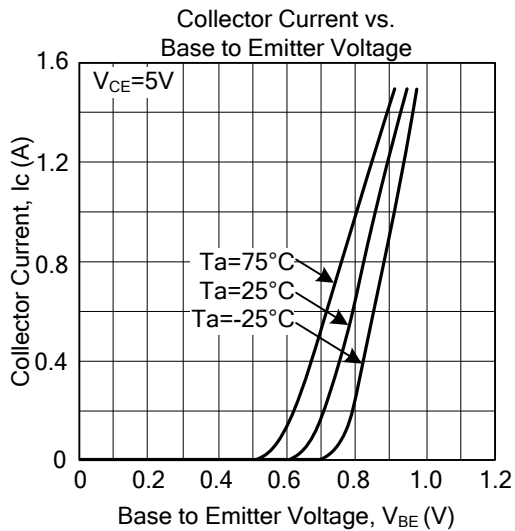
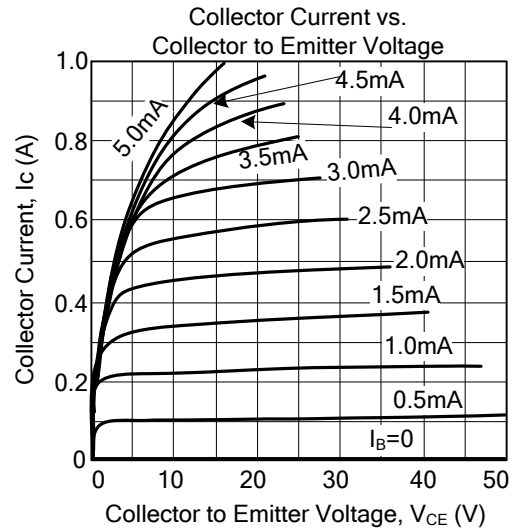
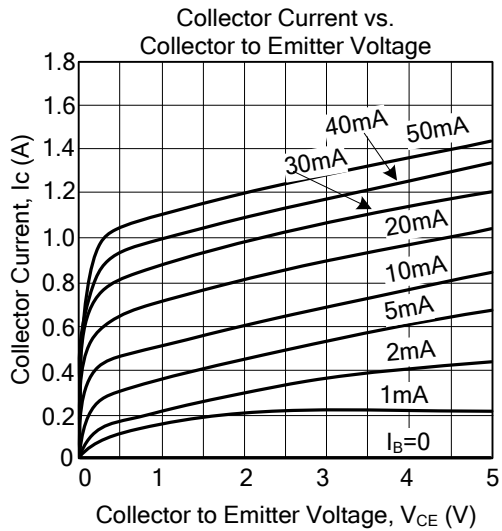
■ CLASSIFICATION OF h_{FE1}

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

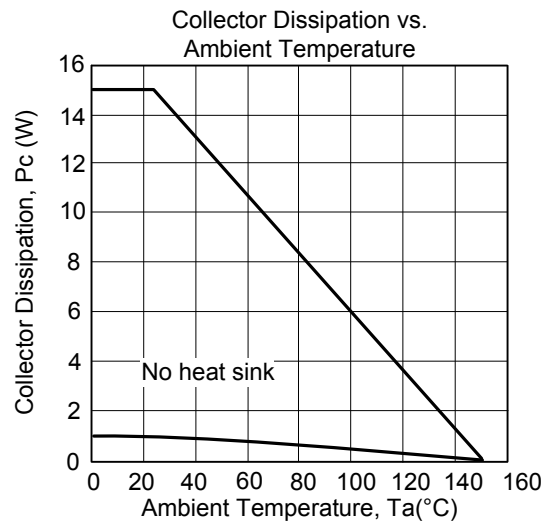
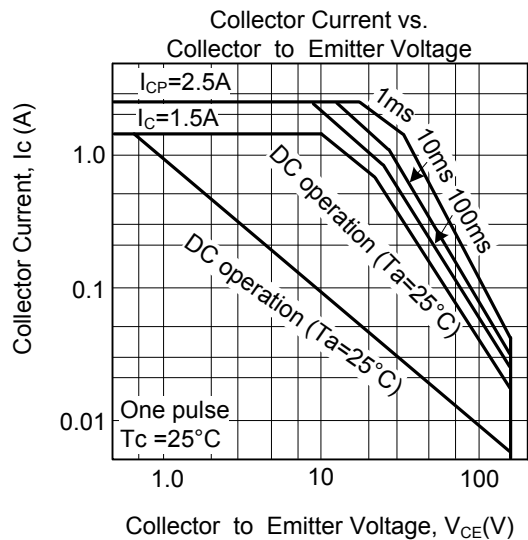
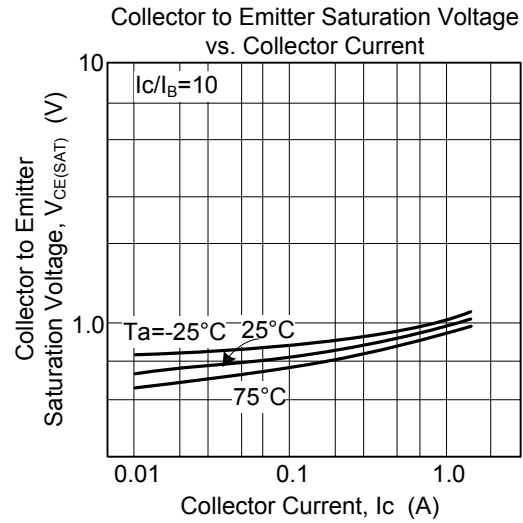
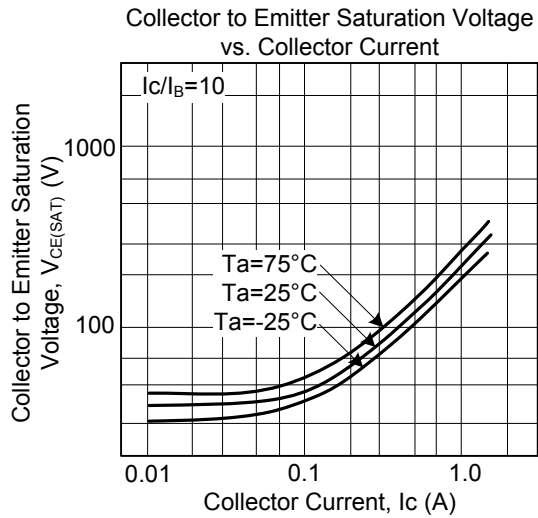
■ SWITCHING TIME TEST CIRCUIT



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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