



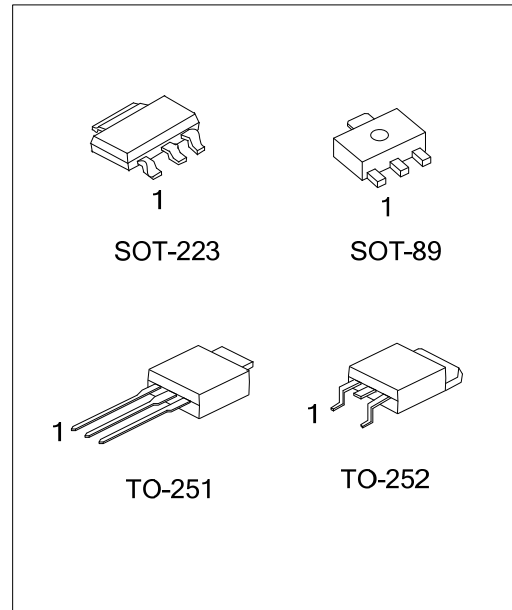
## 2SC3669

## NPN EPITAXIAL SILICON TRANSISTOR

POWER AMPLIFIER  
APPLICATIONS POWER  
SWITCHING APPLICATIONS

### FEATURES

- \* Low saturation voltage  
 $V_{CE(SAT)}=0.5V$  (Max.)
- \* High speed switching time:  $T_{STG}=1.0\mu s$  (Typ.)



### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC3669L-x-AA3-R	2SC3669G-x-AA3-R	SOT-223	B	C	E	Tape Reel
2SC3669L-x-AB3-R	2SC3669G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SC3669L-x-TM3-T	2SC3669G-x-TM3-T	TO-251	B	C	E	Tube
2SC3669L-x-TN3-T	2SC3669G-x-TN3-T	TO-252	B	C	E	Tube
2SC3669L-x-TN3-R	2SC3669G-x-TN3-R	TO-252	B	C	E	Tape Reel

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

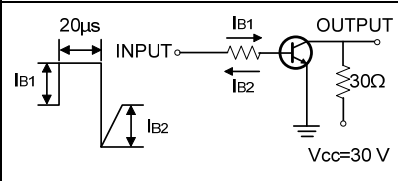
<p>2SC3669L-x-AA3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Free</p>	<p>(1) T: Tube, R: Tape Reel (2) AA3: SOT-223, AB3: SOT-89, TM3: TO-251 TN3: TO-252 (3) x: refer to Classification of <math>h_{FE1}</math> (4) L: Lead Free, G: Halogen Free</p>
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■ PIN ABSOLUTE MAXIMUM RATING (T<sub>A</sub>=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V <sub>CBO</sub>	80	V
Collector-Emitter Voltage		V <sub>CEO</sub>	80	V
Emitter-Base Voltage		V <sub>EBO</sub>	5	V
Collector Current		I <sub>C</sub>	2	A
Base Current		I <sub>B</sub>	1	A
Collector Power Dissipation	SOT-223/SOT-89	P <sub>C</sub>	0.5	W
	TO-251/TO-252		1	W
Junction Temperature		T <sub>J</sub>	150	°C
Storage Temperature		T <sub>STG</sub>	-55 ~ +150	°C

- Note 1. 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.
2. The device is guaranteed to meet performance specification within 0°C~70°C operating temperature range and assured by design from -20°C~85°C.

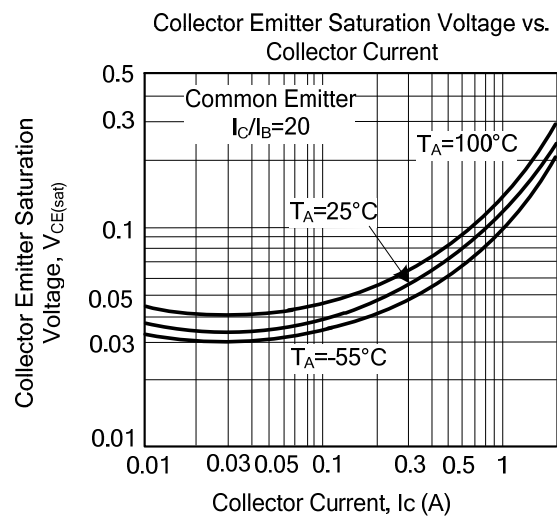
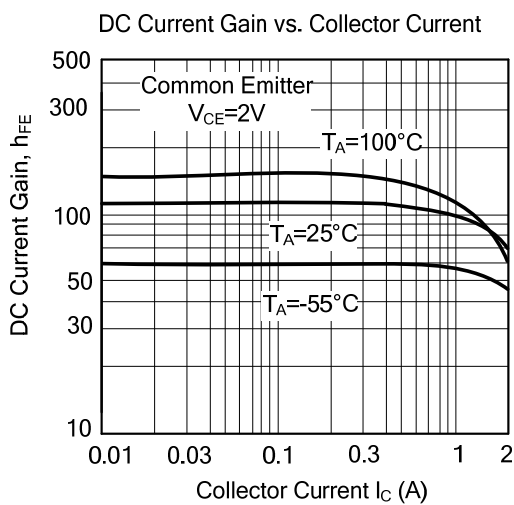
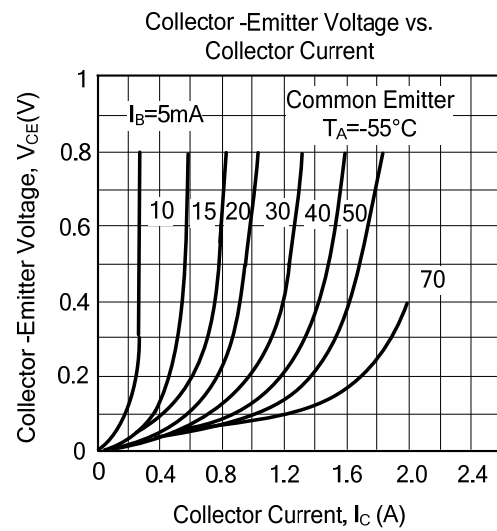
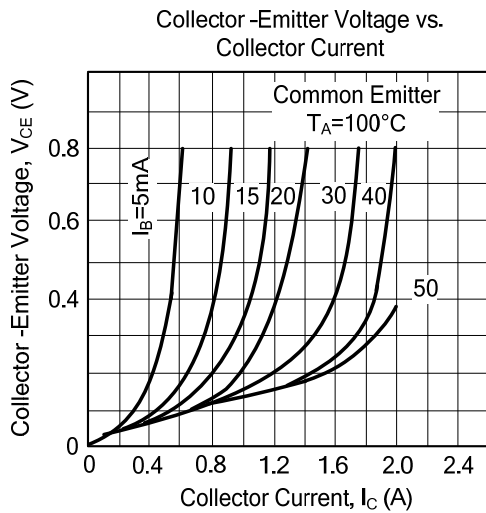
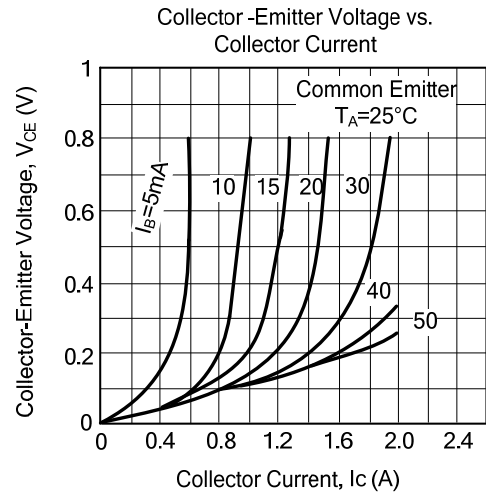
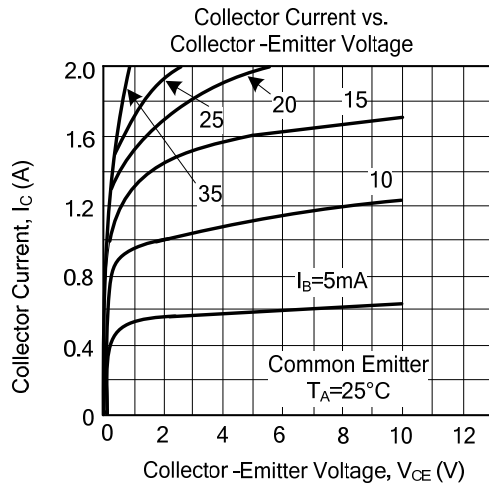
■ ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Breakdown Voltage		V <sub>(BR)CEO</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> = 0	80			V
Collector Cut-Off Current		I <sub>CBO</sub>	V <sub>CB</sub> =80V, I <sub>E</sub> = 0			1.0	μA
Emitter Cut-Off Current		I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> =0			1.0	μA
DC Current Gain		h <sub>FE1</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A	70		240	
		h <sub>FE2</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =1.5A	40			
Collector-Emitter Saturation Voltage		V <sub>CE(SAT)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =0.05A		0.15	0.5	V
Base- Emitter Saturation Voltage		V <sub>BE(SAT)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =0.05A		0.9	1.2	V
Transition Frequency		f <sub>T</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A		100		MHz
Collector Output Capacitance		C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f=1MHz		30		pF
Switching Time	Turn-on Time	t <sub>ON</sub>			0.2		μs
	Storage Time	T <sub>STG</sub>			1.0		μs
	Fall Time	t <sub>f</sub>		I <sub>B1</sub> = -I <sub>B2</sub> =0.05A DUTY CYCLE ≤ 1%		0.2	

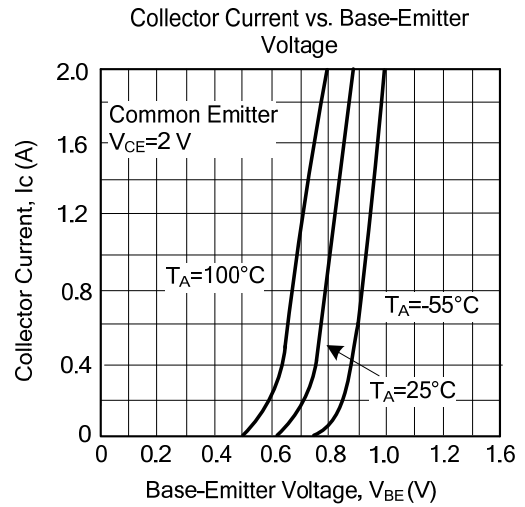
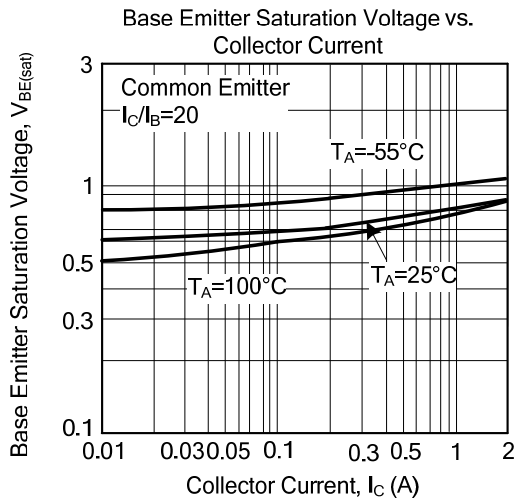
■ CLASSIFICATION OF h<sub>FE1</sub>

RANK	O	Y
RANGE	70~140	120~240

## TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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