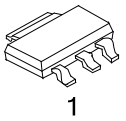
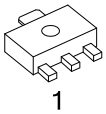
2SC3669

NPN EPITAXIAL SILICON TRANSISTOR

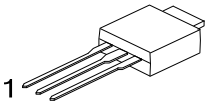
POWER AMPLIFIER
APPLICATIONS POWER
SWITCHING APPLICATIONS



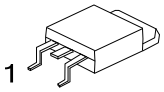
SOT-223



SOT-89



TO-251



TO-252

■ FEATURES

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

■ ORDERING INFORMATION

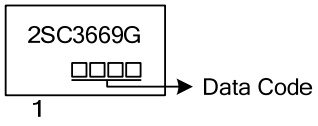
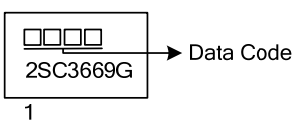
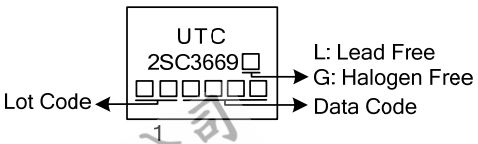
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	2SC3669G-x-AA3-R	SOT-223	B	C	E	Tape Reel
-	2SC3669G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SC3669L-x-TM3-T	2SC3669G-x-TM3-T	TO-251	B	C	E	Tube
2SC3669L-x-TN3-R	2SC3669G-x-TN3-R	TO-252	B	C	E	Tape Reel

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

2SC3669G-x-AA3-R
- (1) Packing Type
- (2) Package Type
- (3) Rank
- (4) Green Package

(1) R: Tape Reel, T: Tube
(2) AA3: SOT-223, AB3: SOT-89, TM3: TO-251
TN3: TO-252
(3) x: refer to Classification of h_{FE1}
(4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

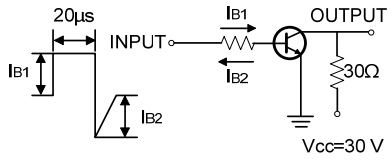
SOT-223	SOT-89	TO-251 / TO-252
		

■ PIN ABSOLUTE MAXIMUM RATING (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CBO}	80	V
Collector-Emitter Voltage		V_{CEO}	80	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	2	A
Base Current		I_B	1	A
Collector Power Dissipation	SOT-223/SOT-89	P_C	0.5	W
	TO-251/TO-252		1	W
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Notes: 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_A=25°C, unless otherwise specified)

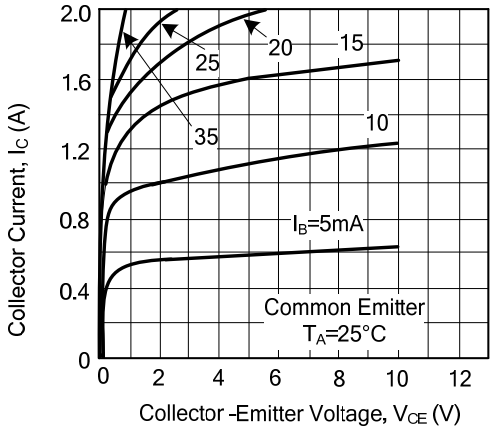
PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C= 10mA, I_B= 0	80			V
Collector Cut-Off Current		I_{CBO}	V_{CB}=80V, I_E= 0			1.0	μA
Emitter Cut-Off Current		I_{EBO}	V_{EB}= 5V, I_C=0			1.0	μA
DC Current Gain		h_{FE1}	V_{CE}=2V, I_C=0.5A	70		240	
		h_{FE2}	V_{CE}=2V, I_C=1.5A	40			
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	I_C=1A, I_B=0.05A		0.15	0.5	V
Base- Emitter Saturation Voltage		$V_{BE(SAT)}$	I_C=1A, I_B=0.05A		0.9	1.2	V
Transition Frequency		f_T	V_{CE}=2V, I_C=0.5A		100		MHz
Collector Output Capacitance		Cob	V_{CB}= 10V, I_E= 0, f=1MHz		30		pF
Switching Time	Turn-on Time	t_{ON}			0.2		μs
	Storage Time	T_{STG}			1.0		μs
	Fall Time	t_f	I_{B1}= -I_{B2}=0.05A DUTY CYCLE ≤ 1%		0.2		μs

■ CLASSIFICATION OF h_{FE1}

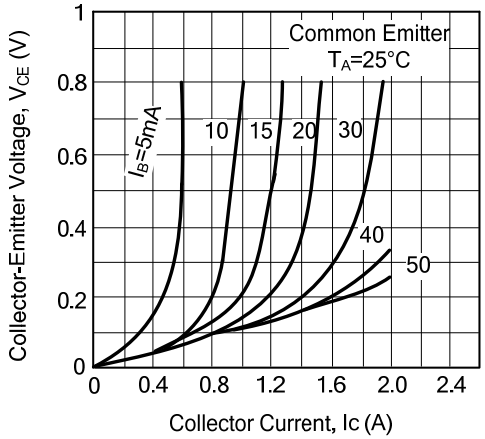
RANK	O	Y
RANGE	70~140	120~240

■ TYPICAL CHARACTERISTICS

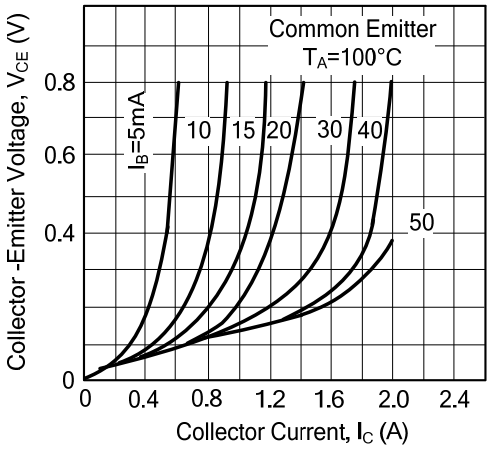
Collector Current vs. Collector -Emitter Voltage



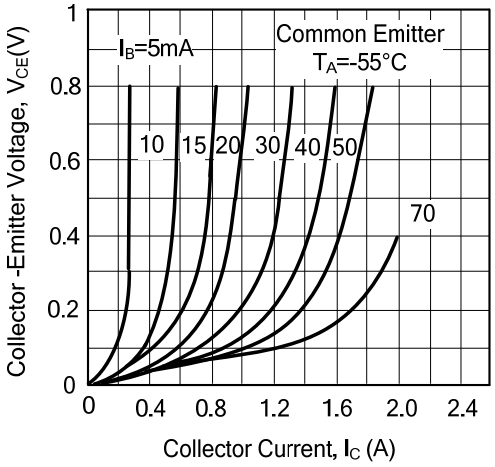
Collector -Emitter Voltage vs. Collector Current



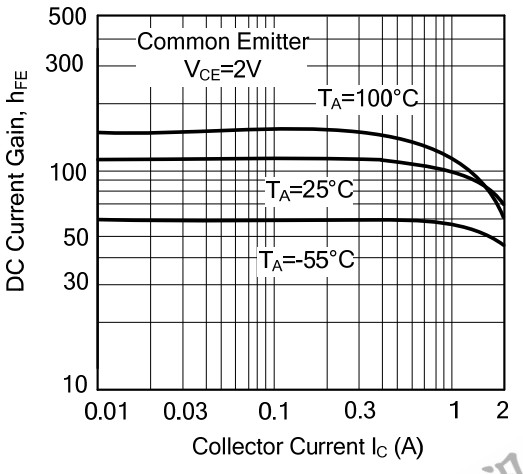
Collector -Emitter Voltage vs. Collector Current



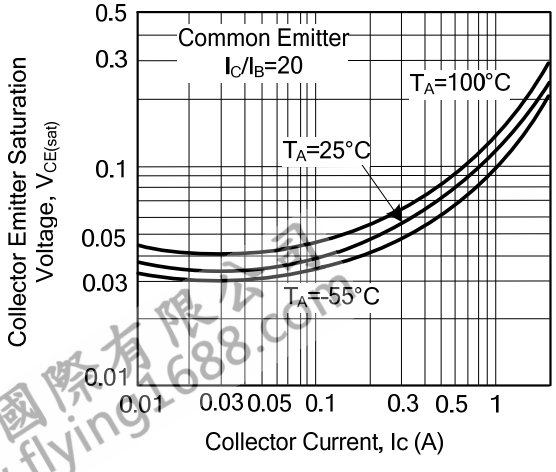
Collector -Emitter Voltage vs. Collector Current



DC Current Gain vs. Collector Current



Collector Emitter Saturation Voltage vs. Collector Current



■ TYPICAL CHARACTERISTICS (Cont.)