



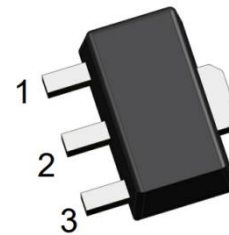
## SSCN1766QGS3

### NPN Plastic-Encapsulate Transistors

#### ➤ Description

This product has the characteristics of high current and high-power consumption. It is universal and suitable for many different applications. It can be used for power amplifiers and switches that require collector currents up to 2A.

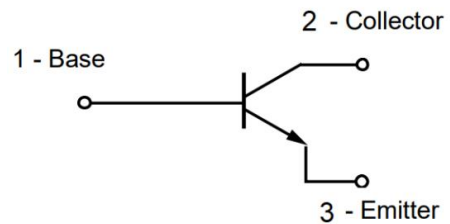
#### ➤ Pin configuration



**SOT-89-3L**

#### ➤ Features

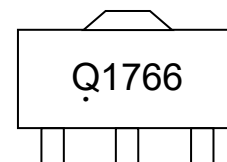
- Driver stages of audio amplifiers
- Linear voltage regulators
- Low-side switches
- Battery-driven devices
- Power management
- MOSFET drivers



**Circuit Diagram**

#### ➤ Ordering Information

Device	Package	Shipping
SSCN1766QGS3	SOT-89	1000/Reel



**Marking (Top View)**



➤ **Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$  unless otherwise noted)**

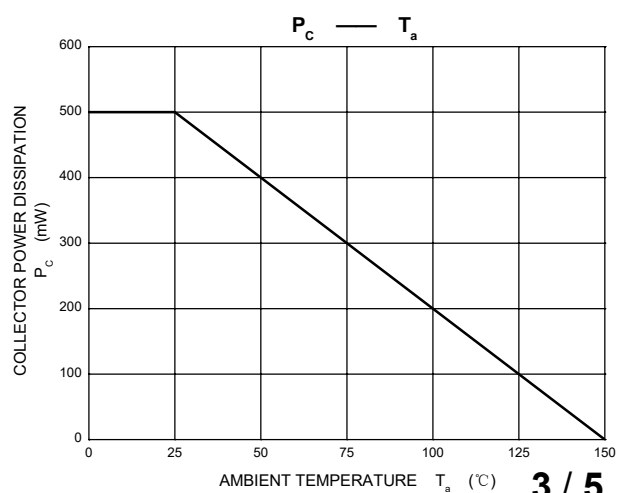
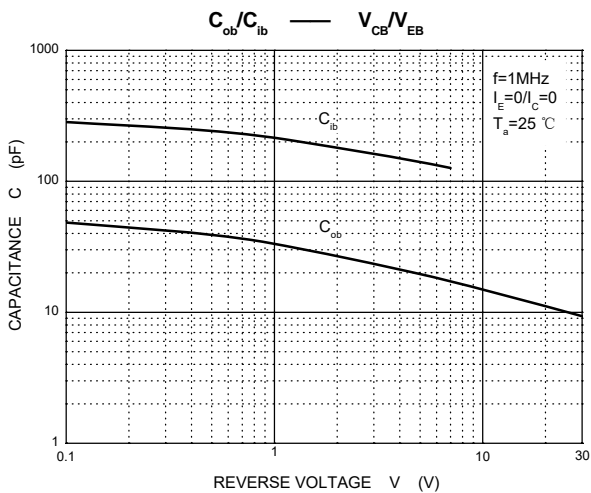
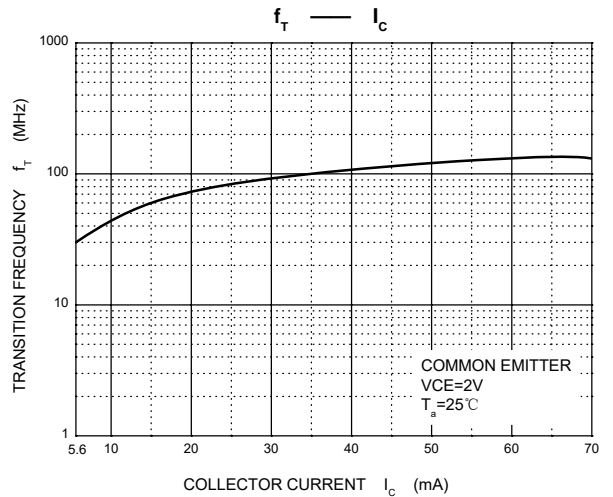
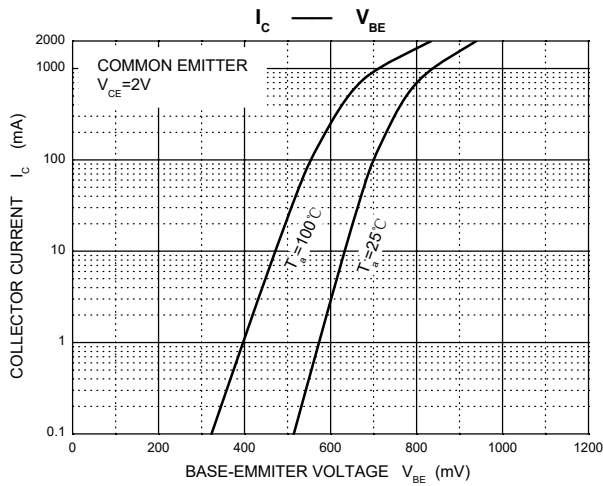
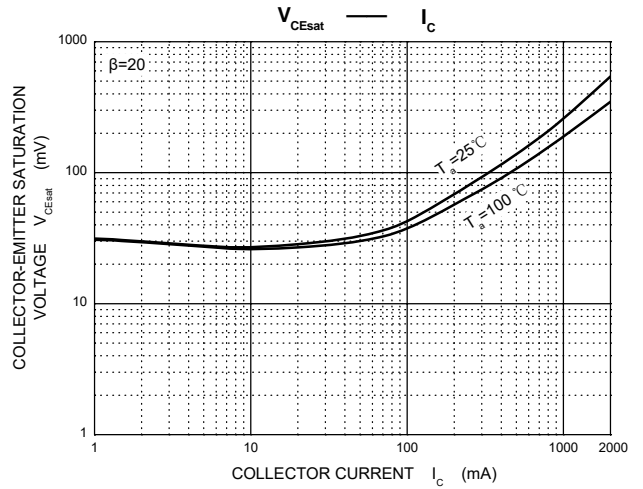
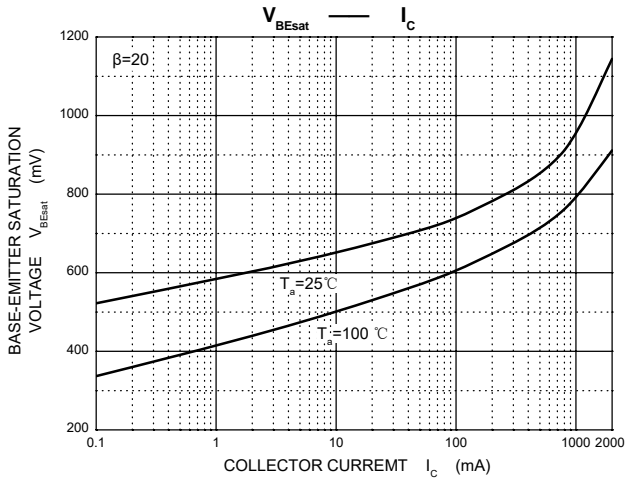
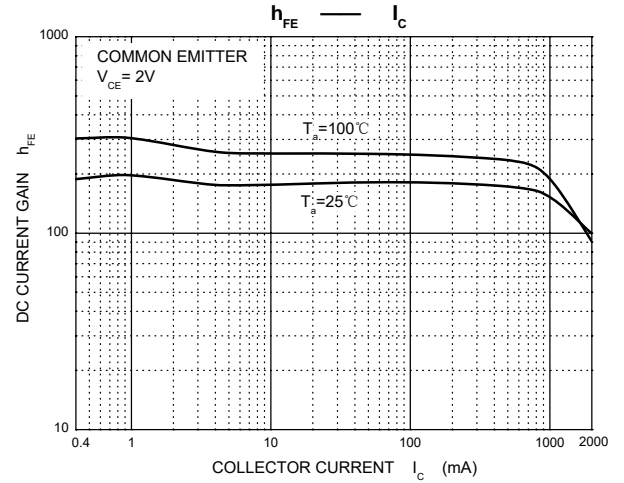
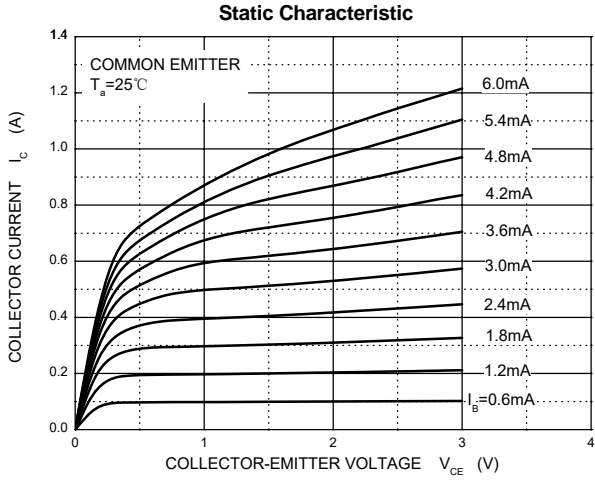
Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CB0}$	50	V
Collector- Emitter Voltage	$V_{CE0}$	50	V
Emitter-Base Voltage	$V_{EB0}$	5	V
Collector Current-Continuous	$I_C$	2	A
Collector Power Dissipation	$P_C$	500	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	250	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	-55 to 150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to 150	$^\circ\text{C}$

➤ **Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise noted)**

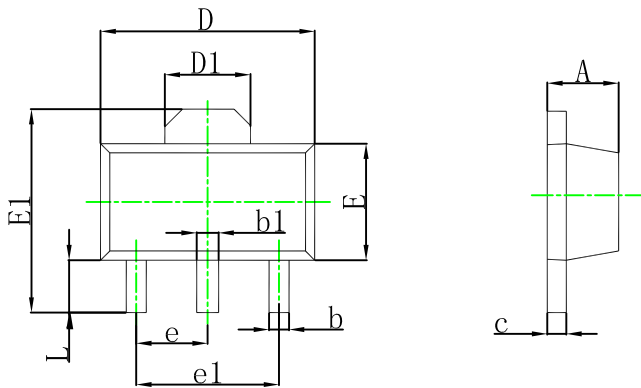
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=100\mu\text{A}, I_E=0$	50			V
Collector-emitter Breakdown Voltage	$BV_{CE0}$	$I_C=1\text{mA}, I_B=0$	50			V
Emitter -Base Breakdown Voltage	$BV_{EB0}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector Cutoff Current	$I_{CB0}$	$V_{CB}=50\text{V}, I_E=0$			100	nA
Emitter Cutoff Current	$I_{EB0}$	$V_{EB}=5\text{V}, I_C=0$			100	nA
DC Current Gain	$h_{FE1}$	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	120		270	
DC Current Gain	$H_{FE2}$	$V_{CE}=2\text{V}, I_C=2\text{A}$	20			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=50\text{mA}$			0.5	V
Base-Emitter Voltage	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=50\text{mA}$			1.2	V
Transition frequency	$f_T$	$V_{CE}=2\text{V}, I_C=0.5\text{A}$ $f=100\text{MHz}$		120		MHz



## Typical Performance Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

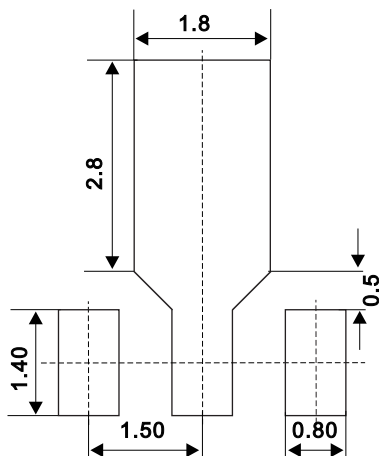


## ➤ Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.	1.	0.	0.
b	4000.	6000.	0550.	0630.
b1	3200.	5200.	0130.	0200.
c	4000.	5800.	0160.	0230.
D	3504.	4404.	0140.	0170.
D1	1.550 REF.		0.061 REF.	
E	4002.	6002.	1730.	1810.
E1	3003.	6004.	0910.	1020.
e	940 1.500 TYP. 250		155 0.060 TYP. 167	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

## SOT-89-3L Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.



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