



## SSCN84XGS7

### NPN Switching Transistor

#### ➤ Description

This product is general usage and suitable for many different applications. It can be used for medium power amplifiers and switches requiring collector currents up to 100 mA.

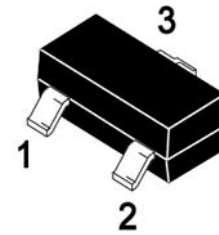
#### ➤ Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

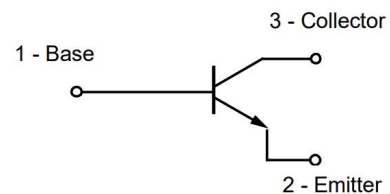
#### ➤ Ordering Information

Device	Marking	Package	Shipping
SSCN846AGS7	1A	SOT-323	3000/Reel
SSCN846BGS7	1B		
SSCN847AGS7	1E		
SSCN847BGS7	1F		
SSCN847CGS7	1G		
SSCN848AGS7	1J		
SSCN848BGS7	1K		
SSCN848CGS7	1L		

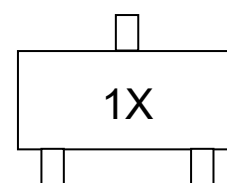
#### ➤ Pin configuration



**SOT-323**



**Circuit Diagram**



**Marking (Top View)**



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

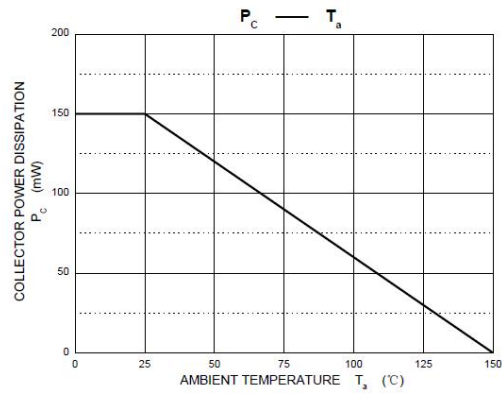
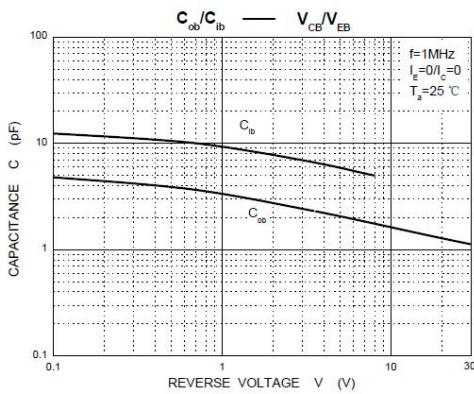
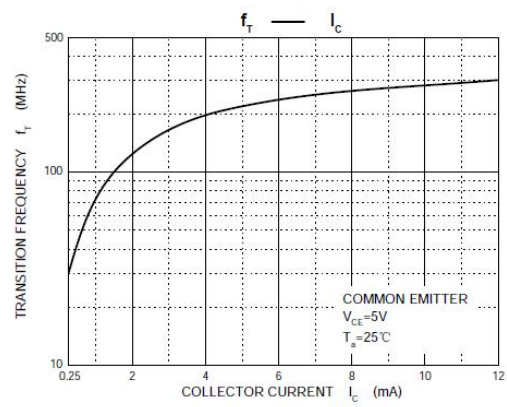
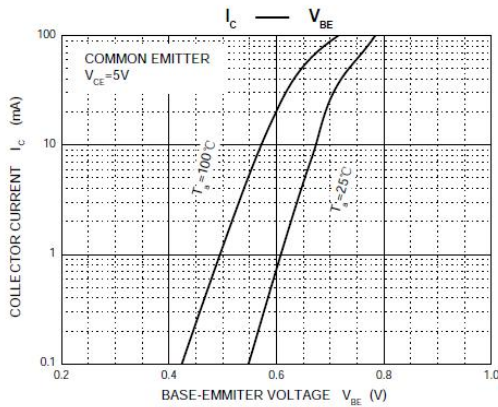
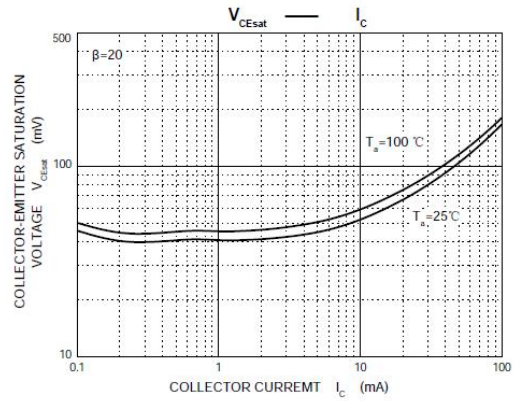
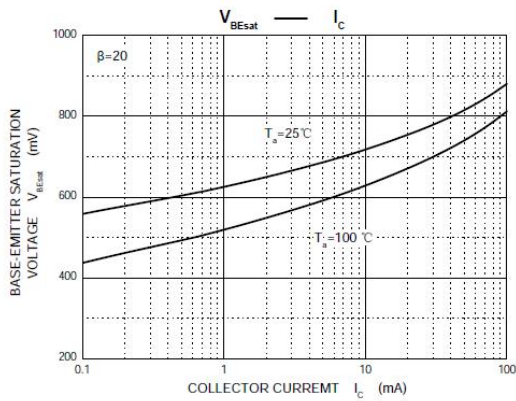
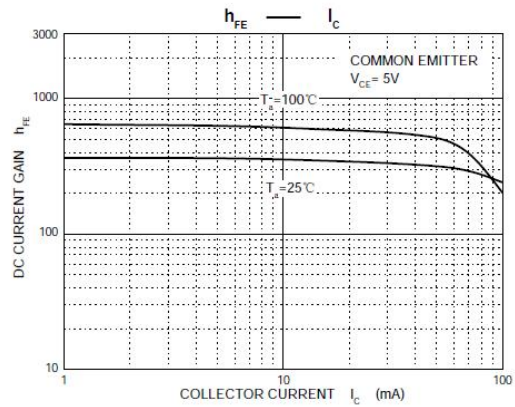
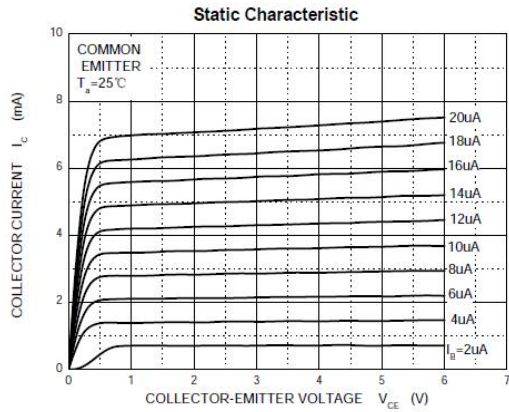
Parameter	Symbol	Value	Unit
Collector-Base Voltage	846	80	V
	847	50	
	848	30	
Collector- Emitter Voltage	846	65	V
	847	45	
	848	30	
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current-Continuous	$I_C$	100	mA
Collector Power Dissipation	$P_C$	150	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C}/\text{W}$
Junction Temperature	$T_J$	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	846	$I_C=10\mu\text{A}, I_E=0$	80			V
	847		50			
	848		30			
Collector-emitter Breakdown Voltage	846	$I_C=10\text{mA}, I_B=0$	65			V
	847		45			
	848		30			
Emitter -Base Breakdown Voltage	$BV_{EBO}$	$I_E=1\mu\text{A}, I_C=0$	6			V
Collector Cutoff Current	846	$V_{CB}=70\text{V}, I_E=0$			0.1	$\mu\text{A}$
	847		$V_{CB}=50\text{V}, I_E=0$			
	848		$V_{CB}=30\text{V}, I_E=0$			
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			100	nA
DC Current Gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=2\text{mA}$	846A, 847A, 848A	110	220	
			846B, 847B, 848B	200	450	
			847C, 848C	420	800	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			0.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$		0.9		V
Collector Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, f=1\text{MHz}$			4.5	pF
Transition frequency	$f_T$	$V_{CE}=5\text{V}, I_C=10\text{mA}$ $f=100\text{MHz}$	100			MHz



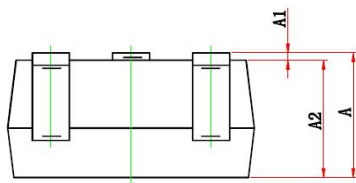
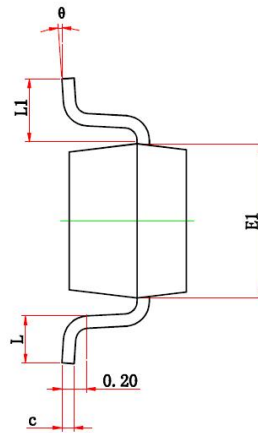
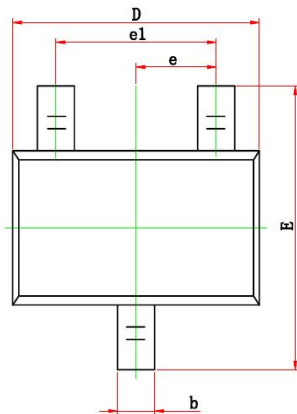
➤ Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise noted)





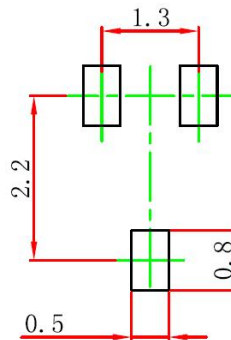
➤ **Package Information**

● **Mechanical Data**



DIM	Millimeters		
	Min.	Typ.	Max.
A	0.90	-	1.10
A1	0.00	-	0.10
A2	0.90	-	1.00
b	0.20	-	0.40
c	0.08	-	0.15
D	2.00	-	2.20
E	2.15	-	2.45
E1	1.15	-	1.35
e		0.65	
e1	1.20	-	1.40
L	0.26	-	0.46
L1	0.525 REF.		
$\theta$	0°	-	8°

● **Recommended Pad outline (Unit: mm)**





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