



SSCN846-847-848GS6

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.

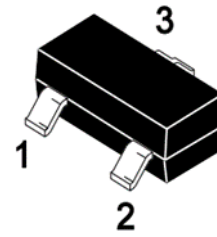
➤ Features

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

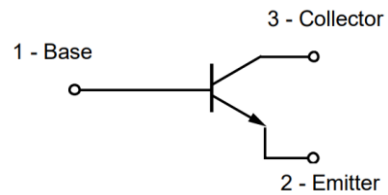
➤ Ordering Information

Device	Marking	Package	Shipping
SSCN846AGS6	1A	SOT-23	3000/Reel
SSCN846BGS6	1B		
SSCN847AGS6	1E		
SSCN847BGS6	1F		
SSCN847CGS6	1G		
SSCN848AGS6	1J		
SSCN848BGS6	1K		
SSCN848CGS6	1L		

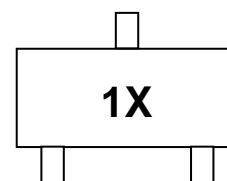
➤ Pin configuration



SOT-23



Circuit Diagram



Marking (Top View)



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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	846	80
		847	50
		848	30
Collector- Emitter Voltage	V_{CEO}	846	65
		847	45
		848	30
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current-Continuous	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$

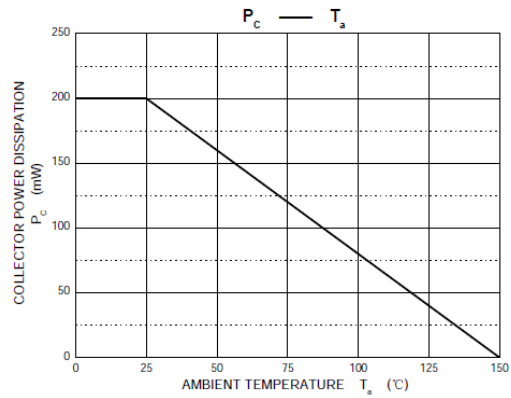
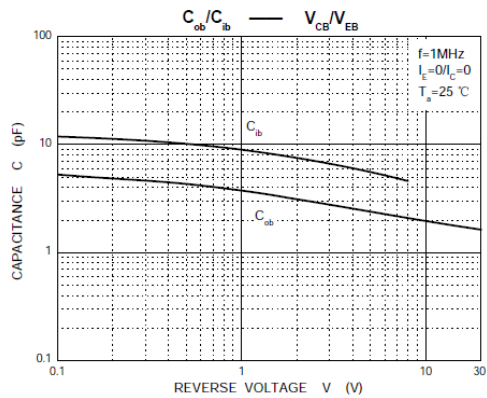
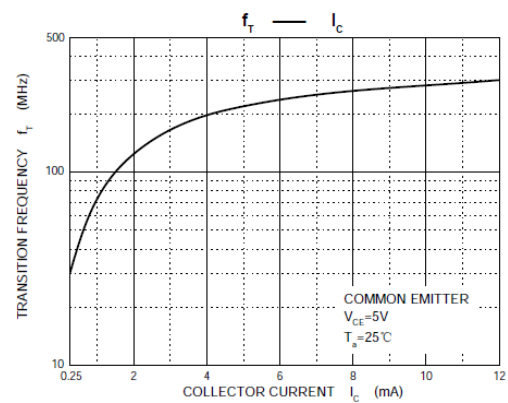
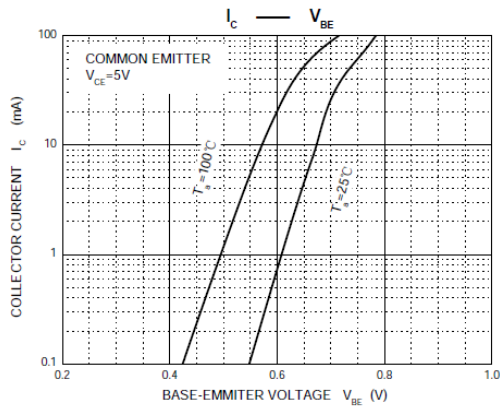
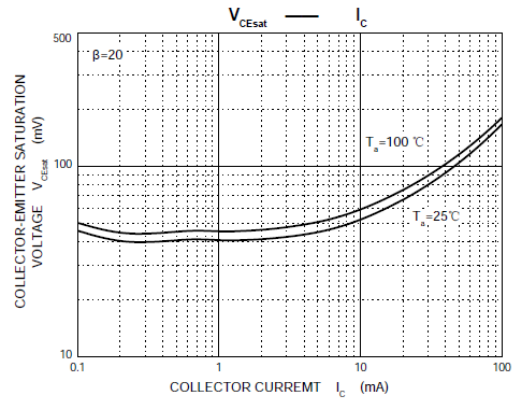
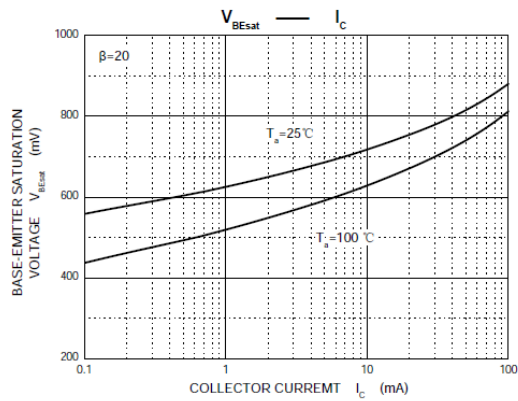
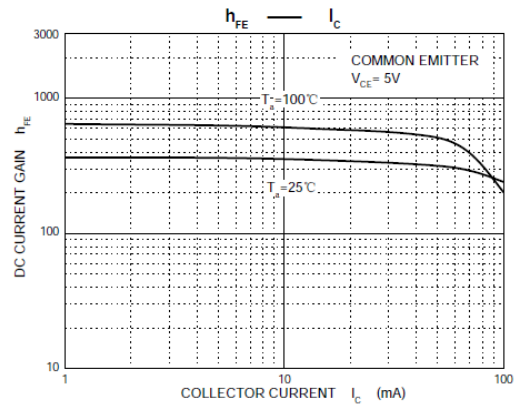
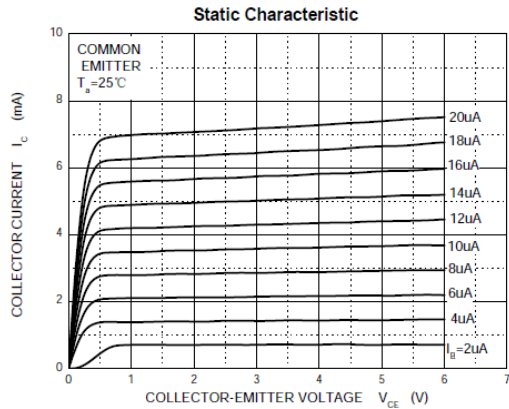
➤ **Electrical Characteristics** ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=10\mu\text{A}, I_E=0$	846	80		V
			847	50		
			848	30		
Collector-emitter Breakdown Voltage	BV_{CEO}	$I_C=10\text{mA}, I_B=0$	846	65		V
			847	45		
			848	30		
Emitter -Base Breakdown Voltage	BV_{EBO}	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=70\text{V}, I_E=0$ $V_{CB}=50\text{V}, I_E=0$ $V_{CB}=30\text{V}, I_E=0$	846		0.1	μA
			847			
			848			
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	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			1.1	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



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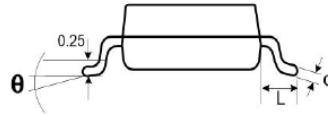
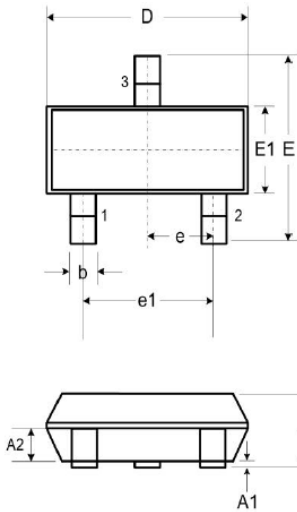
➤ Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)





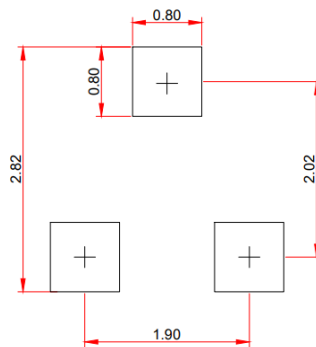
➤ Package Information

SOT-23



DIM	Millimeters		
	Min.	Typ.	Max.
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.51
c	0.08	-	0.18
D	2.80	2.90	3.04
E	2.10	2.37	2.64
E1	1.20	1.30	1.40
e	0.95		
e1	1.90		
L	0.40	0.50	0.60
L1	0.55		
N	3		
θ	0°	-	8°

Recommended Pad outline (Unit: mm)





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