



# 2SD882S

## NPN SILICON TRANSISTOR

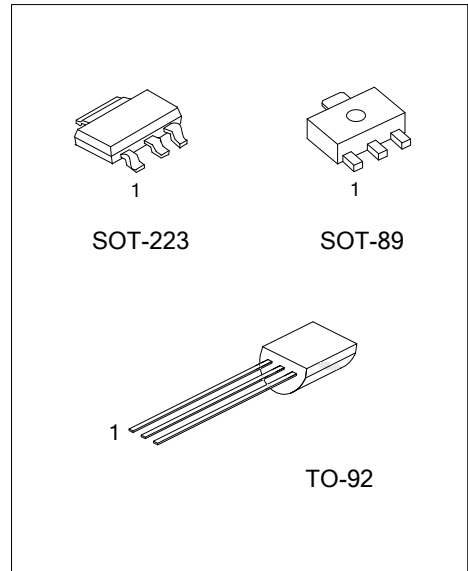
### MEDIUM POWER LOW VOLTAGE TRANSISTOR

■ **FEATURES**

- \* High current output up to 3A
- \* Low saturation voltage
- \* Complement to 2SB772S

■ **APPLICATIONS**

- \* Audio power amplifier
- \* DC-DC convertor
- \* Voltage regulator



■ **ORDERING INFORMATION**

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	2SD882SG-x-AA3-R	SOT-223	B	C	E	Tape Reel
-	2SD882SG-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SD882SL-x-T92-B	2SD882SG-x-T92-B	TO-92	E	C	B	Tape Box
2SD882SL-x-T92-K	2SD882SG-x-T92-K	TO-92	E	C	B	Bulk

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

<p>2SD882SG-x-AA3-R</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel                  (2) AA3: SOT-223, AB3: SOT-89, T92: TO-92                  (3) x: refer to Classification of <math>h_{FE2}</math>                  (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ **MARKING**

SOT-223	SOT-89	TO-92

■ ABSOLUTE MAXIMUM RATING ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified )

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CB0}$	40	V
Collector-Emitter Voltage	$V_{CE0}$	30	V
Emitter-Base Voltage	$V_{EB0}$	7	V
Collector Current	DC	$I_C$	3
	Pulse	$I_{CP}$	7
Base Current	$I_B$	0.6	A
Power Dissipation	SOT-223	$P_D$	1
	SOT-89		0.5
	TO-92		0.75
Junction Temperature	$T_J$	+150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^{\circ}\text{C}$

Note 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.

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

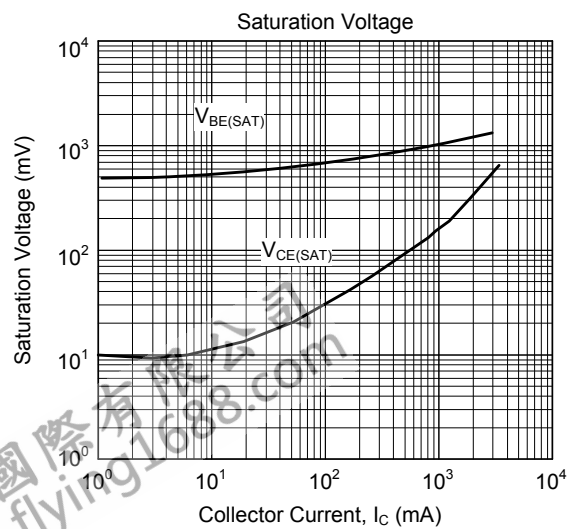
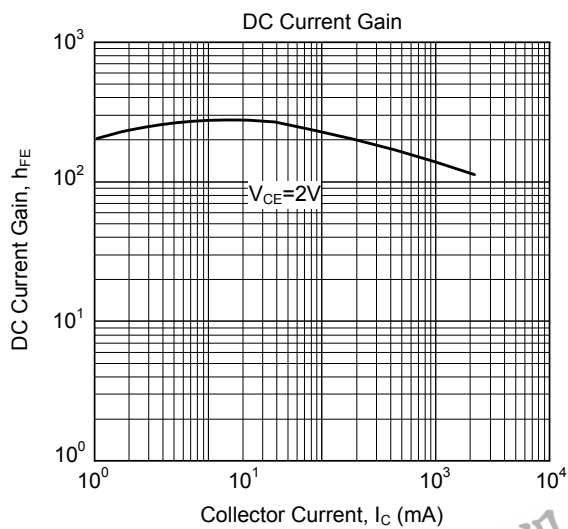
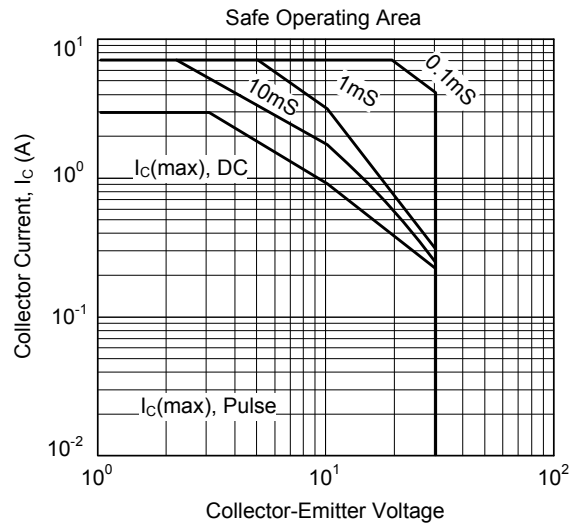
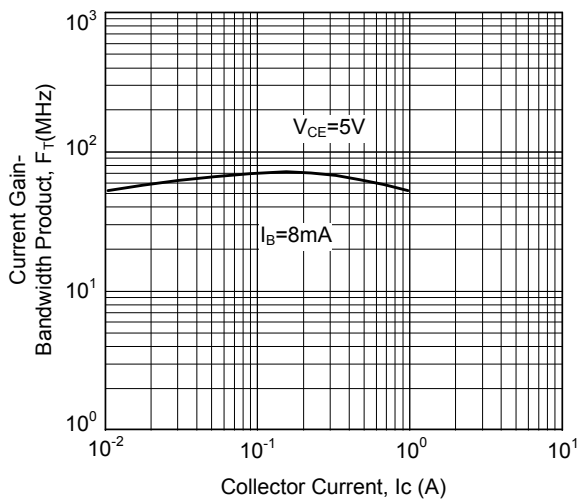
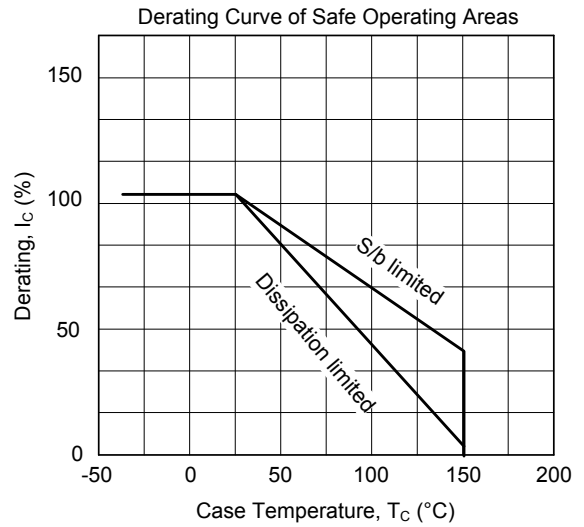
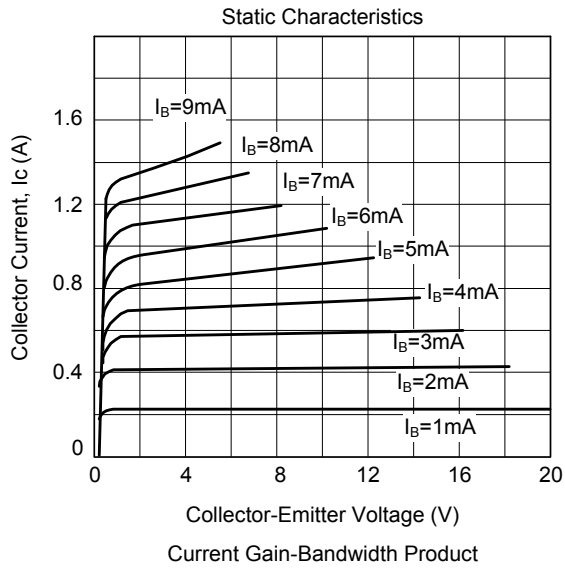
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=100\mu\text{A}$ , $I_E=0$	40			V
Collector-Emitter Breakdown Voltage	$BV_{CE0}$	$I_C=1\text{mA}$ , $I_B=0$	30			V
Emitter-Base Breakdown Voltage	$BV_{EB0}$	$I_E=100\mu\text{A}$ , $I_C=0$	7			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=30\text{V}$ , $I_E=0$			1000	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=3\text{V}$ , $I_C=0$			1000	nA
DC Current Gain (Note 1)	$h_{FE1}$	$V_{CE}=2\text{V}$ , $I_C=20\text{mA}$	30	200		
	$h_{FE2}$	$V_{CE}=2\text{V}$ , $I_C=1\text{A}$	100	150	400	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=2\text{A}$ , $I_B=0.2\text{A}$		0.3	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=2\text{A}$ , $I_B=0.2\text{A}$		1.0	2.0	V
Current Gain Bandwidth Product	$f_T$	$V_{CE}=5\text{V}$ , $I_C=0.1\text{A}$		80		MHz
Output Capacitance	$C_{OB}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		45		pF

Note: Pulse test:  $P_W < 300\mu\text{s}$ , Duty Cycle  $< 2\%$

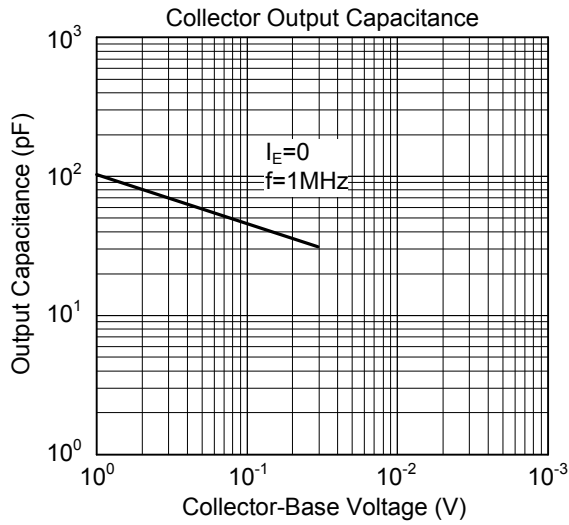
■ CLASSIFICATION OF  $h_{FE2}$

RANK	Q	P	E
RANGE	100-200	160-320	200-400

## TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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