



# 2SB1182

## PNP SILICON TRANSISTOR

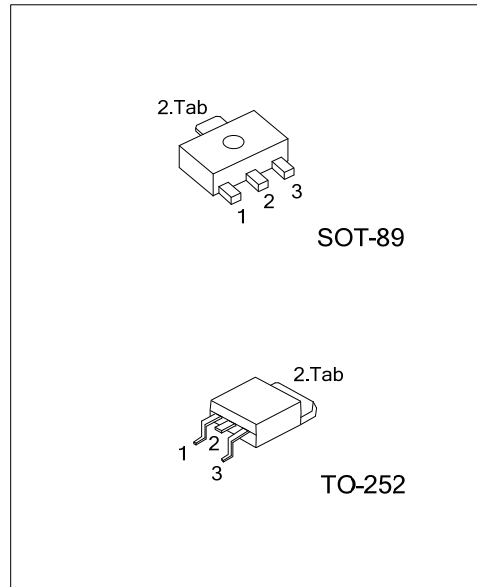
### MEDIUM POWER LOW VOLTAGE TRANSISTOR

■ DESCRIPTION

The UTC **2SB1182** is a medium power low voltage transistor, designed for audio power amplifier, DC-DC converter and voltage regulator.

■ FEATURES

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



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB1182L-x-AB3-R	2SB1182G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SB1182L-x-TN3-R	2SB1182G-x-TN3-R	TO-252	B	C	E	Tape Reel

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

<p>2SB1182G-x-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p>	<p>(1) R: Tape Reel (2) AB3: SOT-89, TN3: TO-252 (3) refer to Classification of h<sub>FE2</sub> (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-89	TO-252

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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CB0}$	-40	V
Collector-Emitter Voltage		$V_{CE0}$	-32	V
Emitter-Base Voltage		$V_{EB0}$	-5	V
Collector Current	DC	$I_C$	-2	A
	Pulse	$I_{CP}$	-3	A
Base Current		$I_B$	-0.6	A
Collector Dissipation ( $T_c=25^\circ\text{C}$ )	SOT-89	$P_C$	3.5	W
	TO-252		10	W
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	$BV_{CB0}$	$I_C=-50\mu\text{A}$	-40			V
Collector-Emitter Breakdown Voltage	$BV_{CE0}$	$I_C=-1\text{mA}$	-32			V
Emitter-Base Breakdown Voltage	$BV_{EB0}$	$I_E=-50\mu\text{A}$	-5			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-20\text{V}$			-1	$\mu\text{A}$
Collector Cut-Off Current	$I_{CEO}$	$V_{CE}=-20\text{V}$			-1	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-4\text{V}$			-1	$\mu\text{A}$
DC Current Gain(Note 1)	$h_{FE}$	$V_{CE}=-3\text{V}$ , $I_C=-0.5\text{A}$	120		390	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-2\text{A}$ , $I_B=-0.2\text{A}$		-0.5	-0.8	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	$f_T$	$V_{CE}=-5\text{V}$ , $I_E=0.5\text{A}$ , $f=100\text{MHz}$		100		MHz
Output Capacitance	$C_{OB}$	$V_{CB}=-10\text{V}$ , $I_E=0\text{A}$ , $f=1\text{MHz}$		50		pF

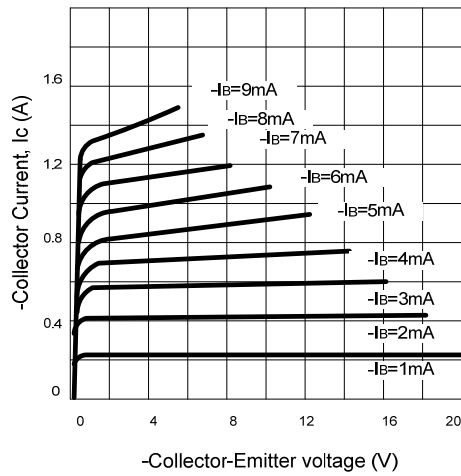
Note 1: Pulse test:  $P_w \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

■ CLASSIFICATION OF  $h_{FE2}$

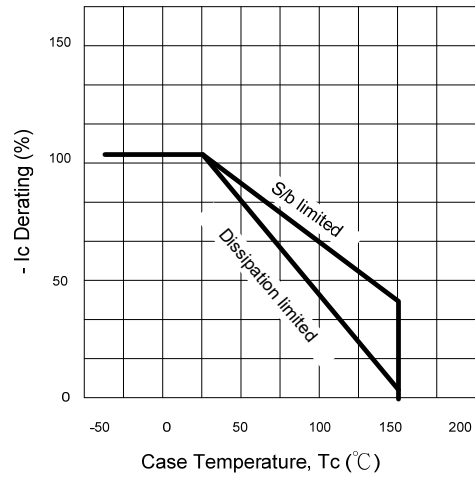
RANK	Q	R
RANGE	120 ~ 270	180 ~ 390

## TYPICAL CHARACTERISTICS

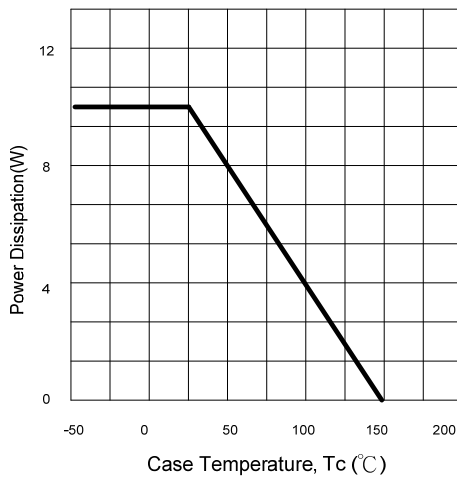
Static Characteristics



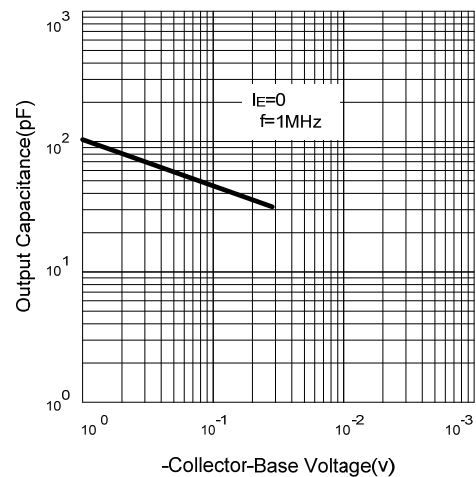
Derating Curve of Safe Operating Areas



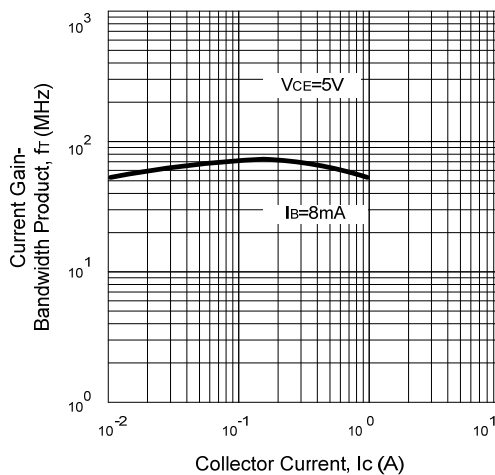
Power Derating



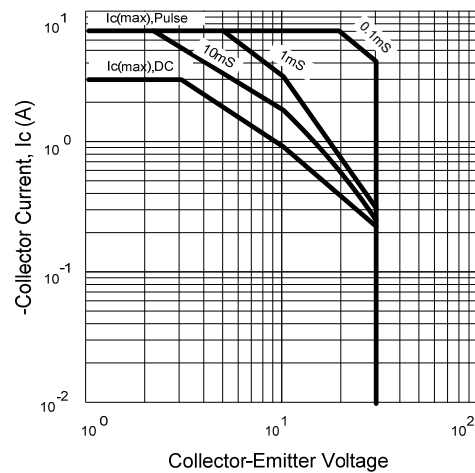
Collector Output Capacitance



Current Gain-Bandwidth Product

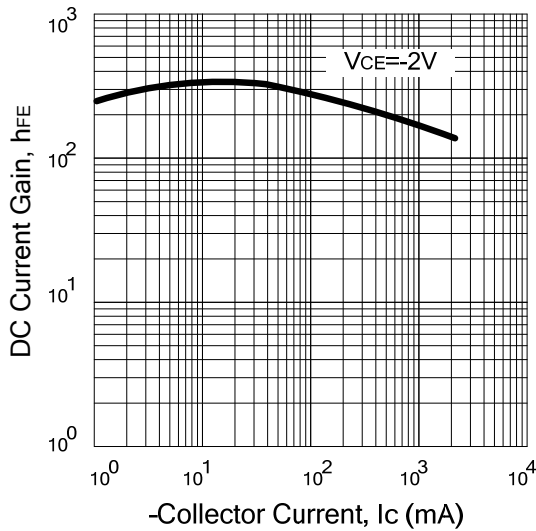


Safe Operating Area

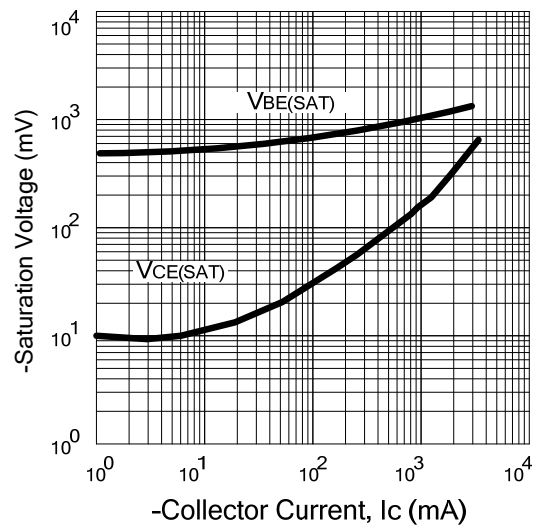


■ TYPICAL CHARACTERISTICS (Cont.)

DC Current Gain



Saturation Voltage



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