



2SB1182

PNP SILICON TRANSISTOR

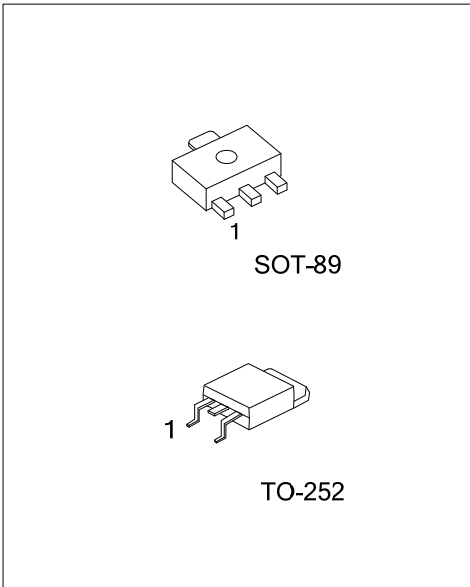
MEDIUM POWER LOW VOLTAGE TRANSISTOR

■ 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	
-	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) R: Tape Reel (2) AB3: SOT-89, TN3: TO-252 (3) refer to Classification of hFE2 (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_{CEO}	-32	V	
Emitter-Base Voltage	V_{EBO}	-5	V	
Collector Current	DC	I_C	-2	A
	Pulse	I_{CP}	-3	A
Base Current	I_B	-0.6	A	
Collector Dissipation ($T_A=25^\circ\text{C}$)	SOT-89	P_C	0.5	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_{CEO}	$I_C = -1\text{mA}$	-32			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -50\mu\text{A}$	-5			V
Collector Cut-Off Current	I_{CB0}	$V_{CB} = -20\text{V}$			-1	μA
Collector Cut-Off Current	I_{CEO}	$V_{CE} = -20\text{V}$			-1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4\text{V}$			-1	μA
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

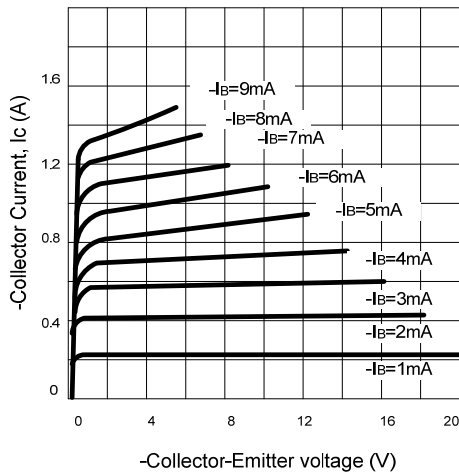
Note 1: Pulse test: $P_w < 300\mu\text{s}$, Duty Cycle $< 2\%$

■ CLASSIFICATION OF h_{FE2}

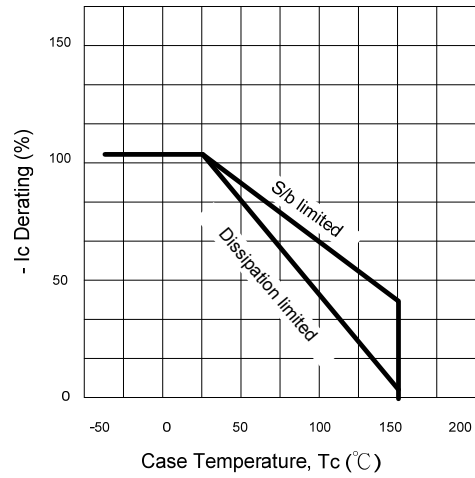
RANK	Q	R
RANGE	120 ~ 270	180 ~ 390

TYPICAL CHARACTERISTICS

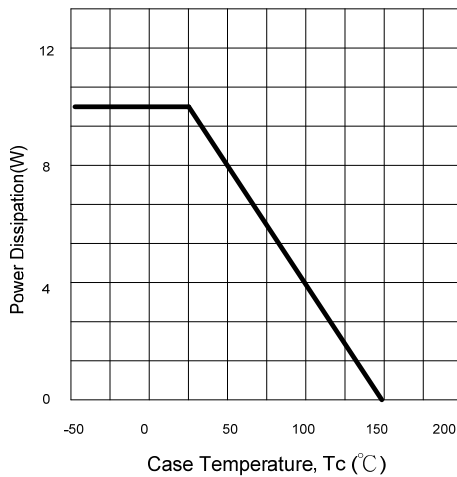
Static Characteristics



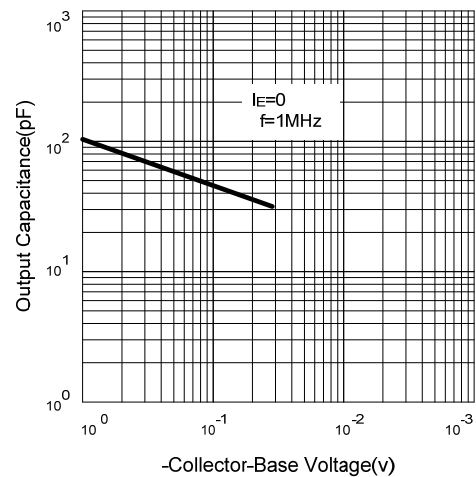
Derating Curve of Safe Operating Areas



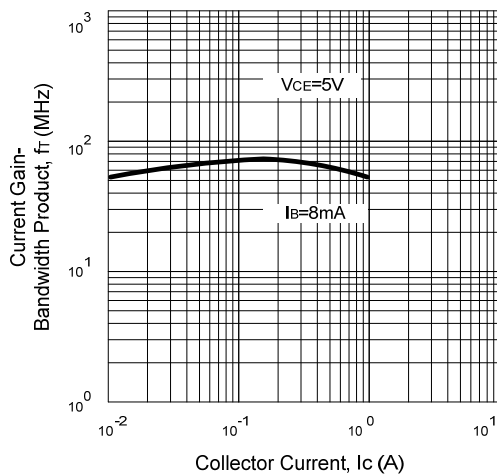
Power Derating



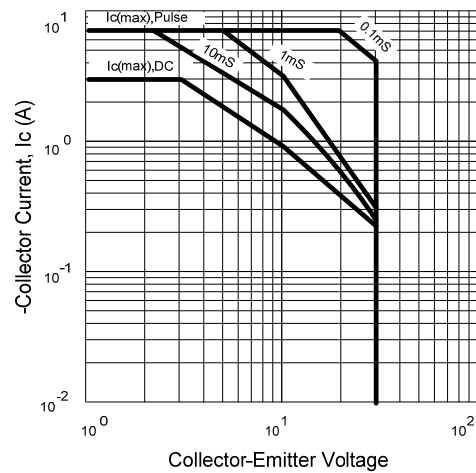
Collector Output Capacitance



Current Gain-Bandwidth Product

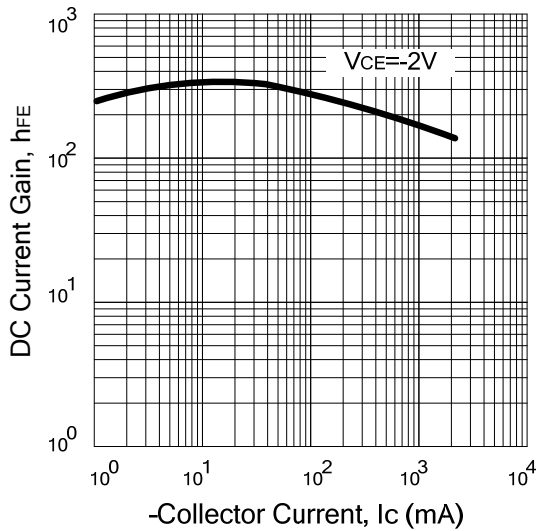


Safe Operating Area

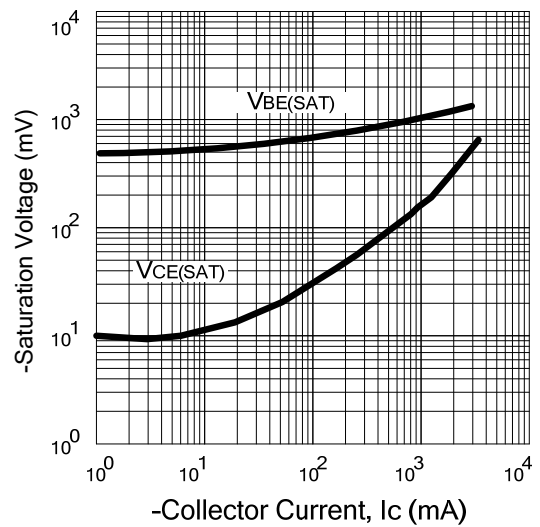


■ TYPICAL CHARACTERISTICS(Cont.)

DC Current Gain



Saturation Voltage



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