



## SB2202

### PNP EPITAXIAL SILICON TRANSISTOR

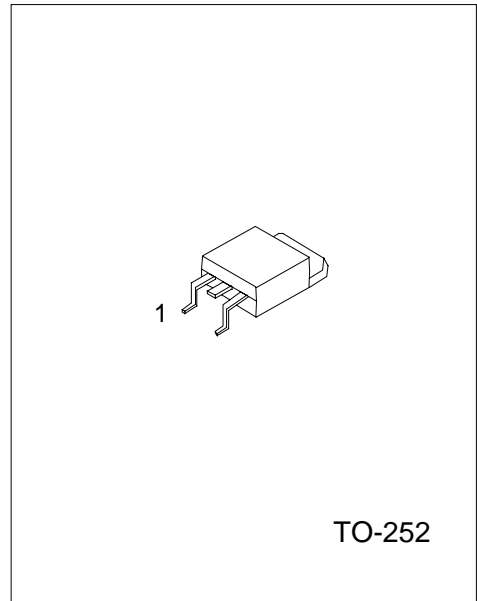
## MEDIUM POWER LOW VOLTAGE TRANSISTOR

### ■ DESCRIPTION

The UTC **SB2202** 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



\* Pb-free plating product number: SB2202L

### ■ PIN CONFIGURATION

PIN NO.	PIN NAME
1	Base
2	Collector
3	Emitter

### ■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead free		
SB2202-TN3-R	SB2202L-TN3-R	TO-252	Tape & Reel
SB2202-TN3-T	SB2202L-TN3-T	TO-252	Tube

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C , unless otherwise specified )

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CBO}$	-40	V
Collector-Emitter Voltage		$V_{CEO}$	-30	V
Emitter-Base Voltage		$V_{EBO}$	-5	V
Base Current		$I_B$	-0.6	A
Collector Current	DC	$I_C$	-3	A
	PULSE	$I_{CM}$	-7	
Collector Dissipation	Tc=25°C	Pc	10	W
	Ta=25°C		1	
Junction Temperature		$T_J$	+150	°C
Storage Temperature		$T_{STG}$	-40 ~ +150	°C

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2A, I_B = -0.2A$		-0.3	-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -2A, I_B = -0.2A$		-1.0	-2.0	V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB} = -30V, I_E = 0$			1	mA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB} = -3V, I_C = 0$			1	mA
DC Current Gain(Note 1)	$h_{FE1}$	$V_{CE} = -2V, I_C = -20mA$	30	200	400	
	$h_{FE2}$	$V_{CE} = -2V, I_C = -1A$	100			
Current Gain Bandwidth Product	$f_T$	$V_{CE} = -5V, I_C = -0.1A$		80		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$		45		pF

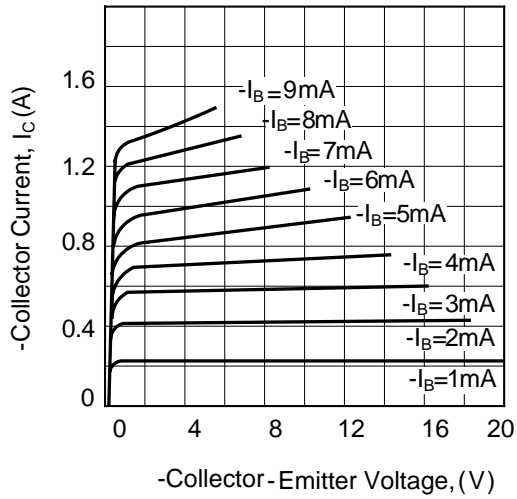
Note 1: Pulse test: PW<300μs, Duty Cycle<2%

■ CLASSIFICATION OF hFE2

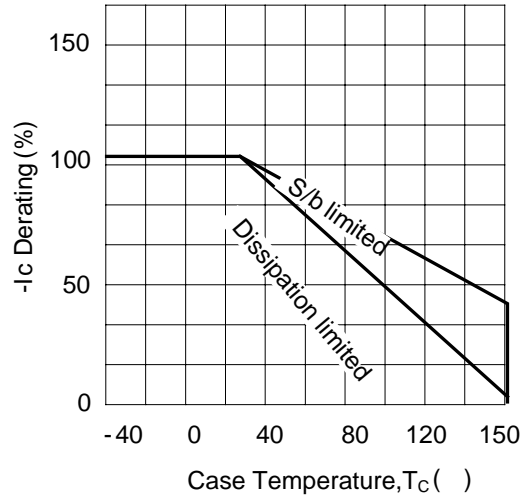
RANK	Q	P	E
RANGE	100 ~ 200	160 ~ 320	200 ~ 400

## TYPICAL CHARACTERISTICS

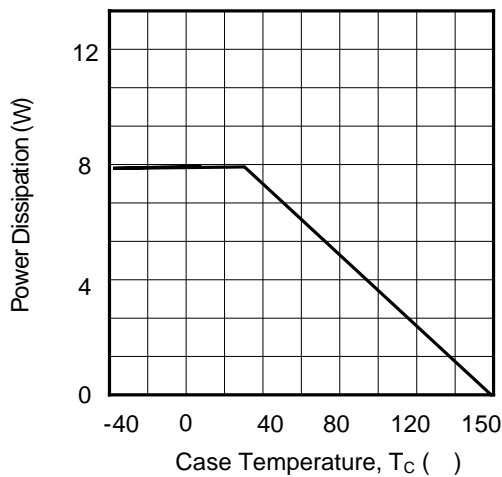
Static characteristics



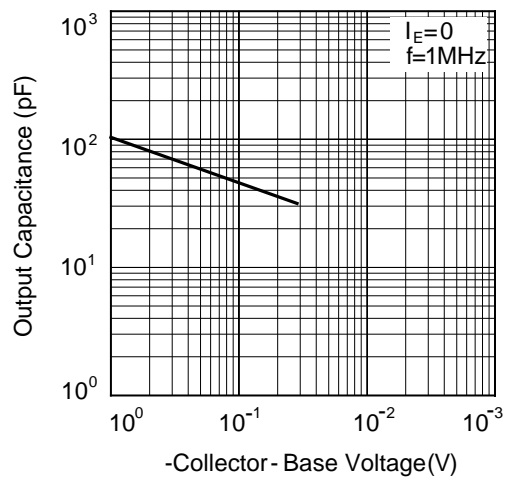
Derating curve of safe operating areas



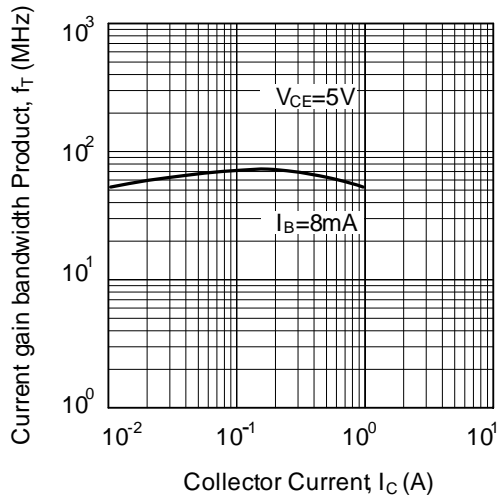
Power derating



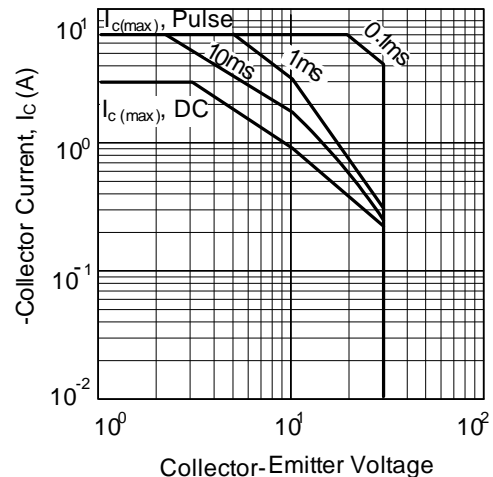
Collector output capacitance



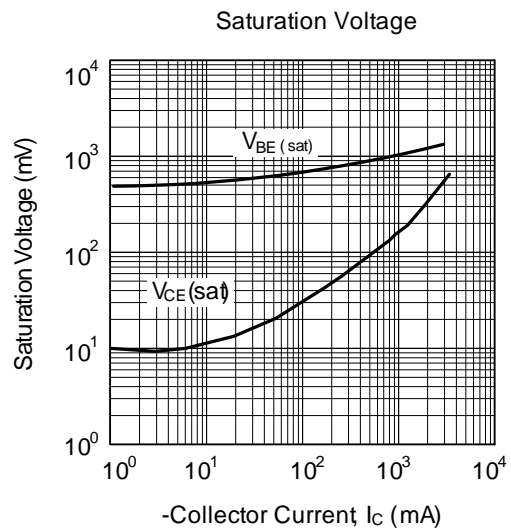
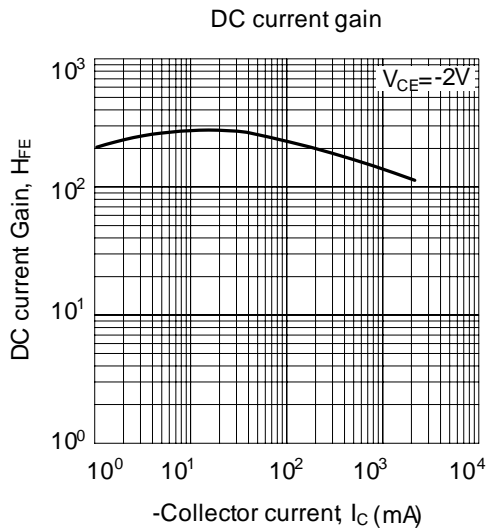
Current gain-bandwidth product



Safe operating area



■ TYPICAL CHARACTERISTICS (cont.)



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