



## 2SB776

## PNP PLANAR TRANSISTOR

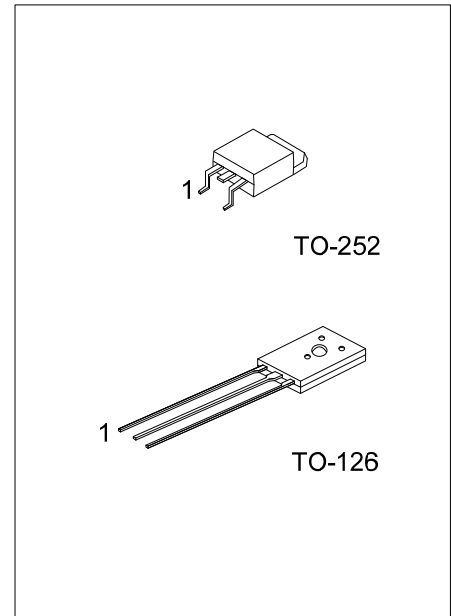
### MEDIUM POWER LOW VOLTAGE TRANSISTOR

#### DESCRIPTION

The UTC 2SB776 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
- \* Complement to 2SD886



#### ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
2SB776-x-T60-K	2SB776L-x-T60-K	2SB776G-x-T60-K	TO-126	E	C	B	Bulk
2SB776-x-TN3-R	2SB776L-x-TN3-R	2SB776G-x-TN3-R	TO-252	B	C	E	Tape Reel

<p>2SB776G-x-T60-K</p>	<p>(1) Packing Type (2) Package Type (3) Rank (4) Halogen Free</p>	<p>(1) K: Bulk, R: Tape Reel (2) T60: TO-126, TN3: TO-252 (3) x: refer to Classification of <math>h_{FE2}</math> (4) G: Halogen Free, L: Lead Free Plating Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	-50	V
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	DC	-3	A
	PULSE	-7	A
Base Current	$I_B$	-0.6	A
Collector Dissipation (T <sub>c</sub> =25°C)	TO-126	10	W
	TO-252	25	W
Junction Temperature	$T_J$	+150	°C
Storage Temperature	$T_{STG}$	-55 ~ +150	°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 (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-50V, I_E=0$			-1000	nA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-3V, I_C=0$			-1000	nA
DC Current Gain (Note)	$h_{FE1}$	$V_{CE}=-2V, I_C=-20mA$	100	200		
	$h_{FE2}$	$V_{CE}=-2V, I_C=-1A$	100	150	400	
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
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

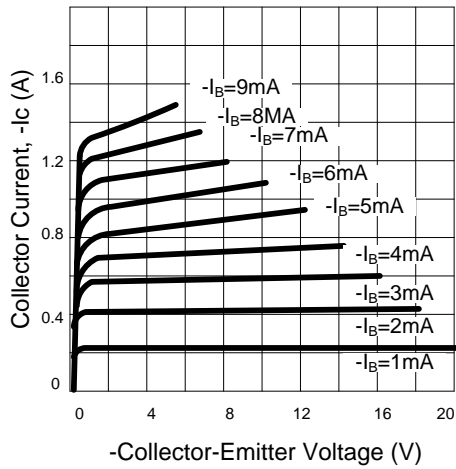
Note: Pulse test: PW<300μs, Duty Cycle<2%

■ CLASSIFICATION OF  $h_{FE2}$

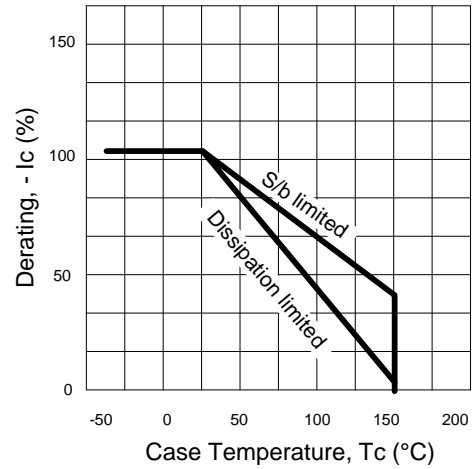
RANK	Q	P	E
RANGE	100-200	160-320	200-400

## TYPICAL CHARACTERISTICS

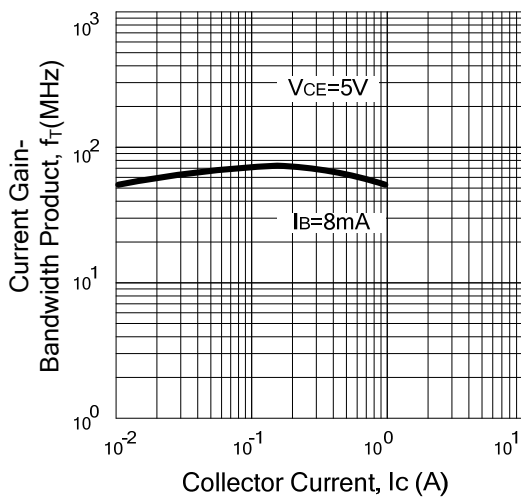
### Static Characteristics



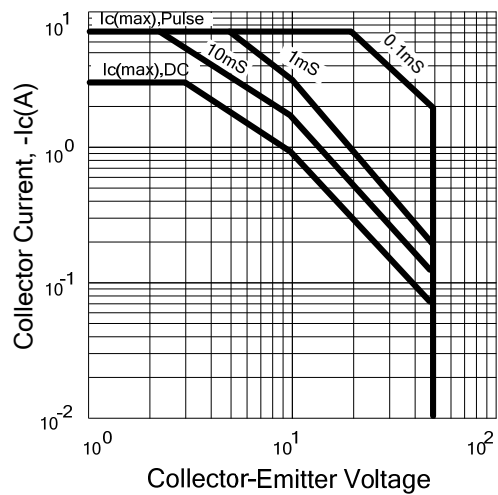
### Derating Curve of Safe Operating Areas



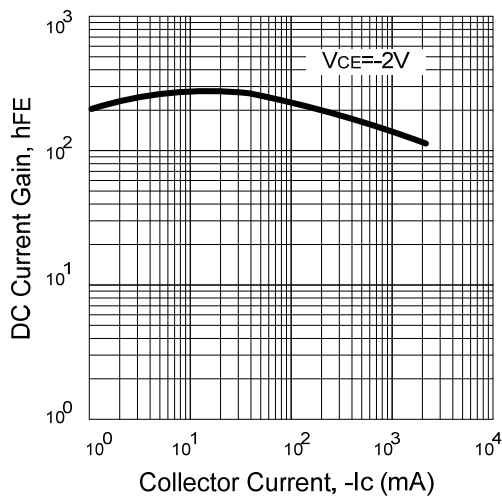
### Current Gain-Bandwidth Product



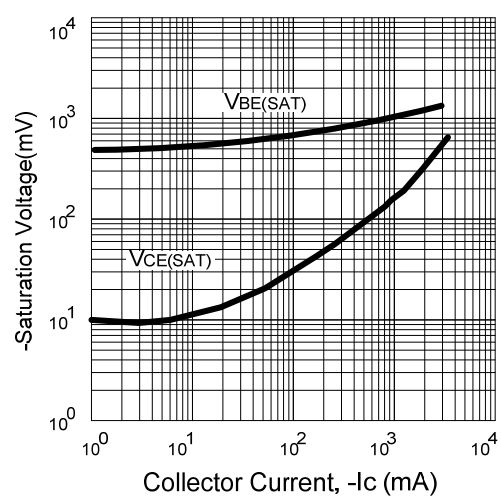
### Safe Operating Area



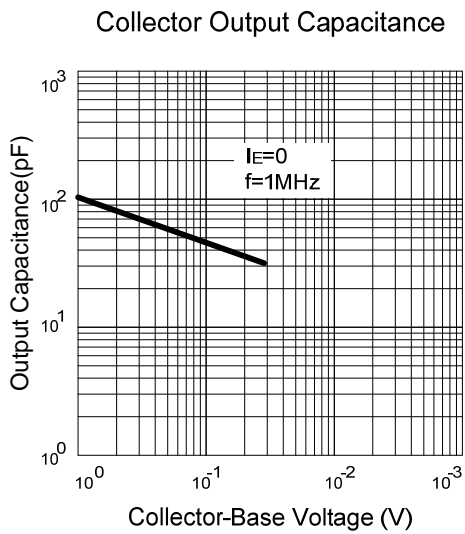
### DC Current Gain



### Saturation Voltage



■ TYPICAL CHARACTERISTICS(Cont.)



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