



2SB776

PNP PLANAR TRANSISTOR

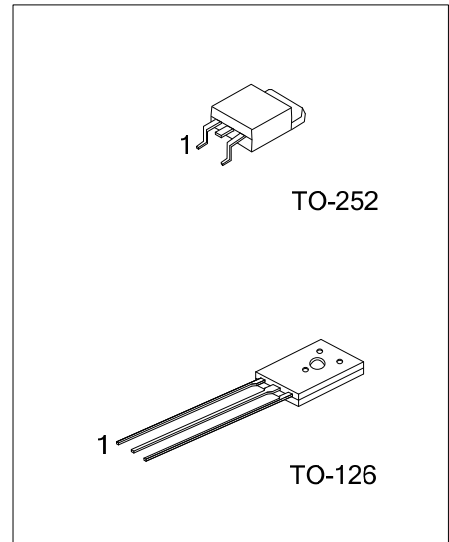
MEDIUM POWER LOW VOLTAGE TRANSISTOR

■ 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
Lead Free	Halogen Free		1	2	3	
2SB776L-x-T60-K	2SB776G-x-T60-K	TO-126	E	C	B	Bulk
2SB776L-x-TN3-R	2SB776G-x-TN3-R	TO-252	B	C	E	Tape Reel

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

<p>2SB776G-x-T60-K</p>	<p>(1) K: Bulk, R: Tape Reel (2) T60: TO-126, TN3: TO-252 (3) x: refer to Classification of h_{FE2} (4) L: Lead Free, G: Halogen Free and Lead Free</p>
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■ MARKING

TO-126	TO-252

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CB0}	-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 ($T_C=25^\circ\text{C}$)	TO-126	10	W
	TO-252	25	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 Cut-Off Current	I_{CBO}	$V_{CB}=-50\text{V}, I_E=0$			-1000	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-3\text{V}, I_C=0$			-1000	nA
DC Current Gain (Note)	h_{FE1}	$V_{CE}=-2\text{V}, I_C=-20\text{mA}$	100	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

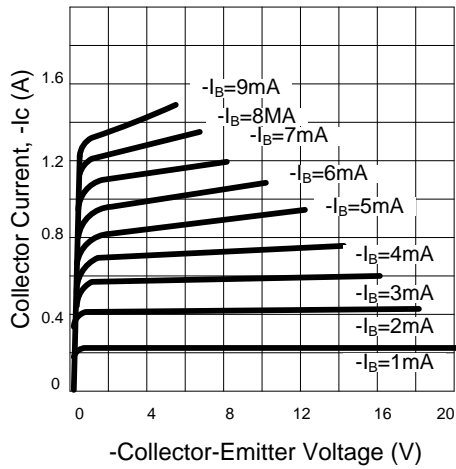
Note: Pulse test: $PW < 300\mu\text{s}$, Duty Cycle $< 2\%$

■ CLASSIFICATION OF h_{FE2}

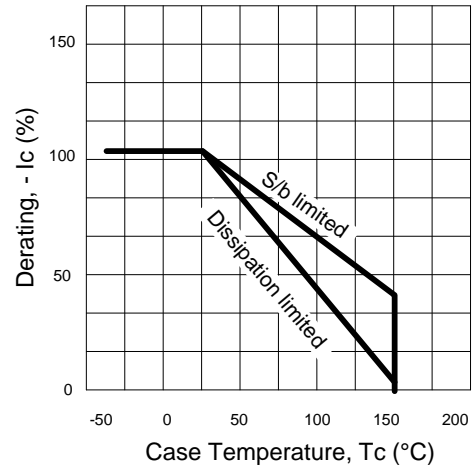
RANK	Q	P	E
RANGE	100-200	160-320	200-400

TYPICAL CHARACTERISTICS

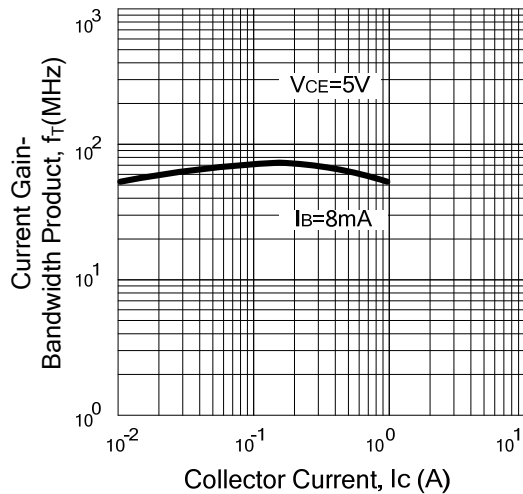
Static Characteristics



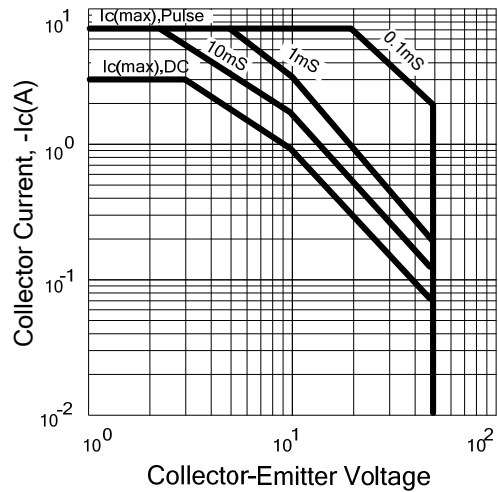
Derating Curve of Safe Operating Areas



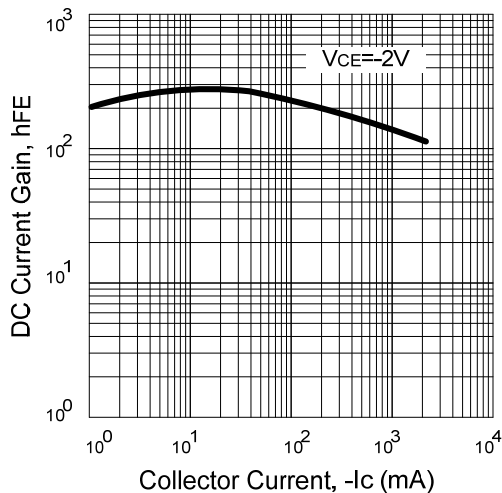
Current Gain-Bandwidth Product



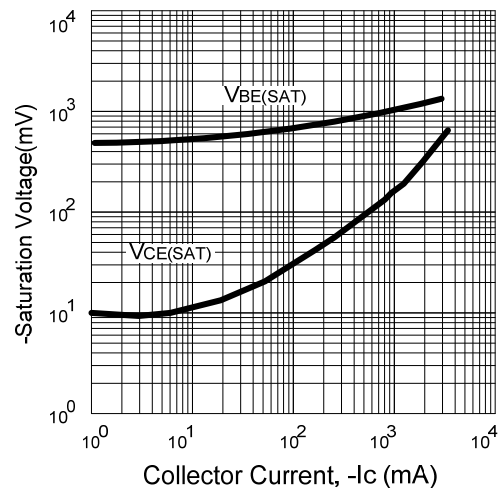
Safe Operating Area



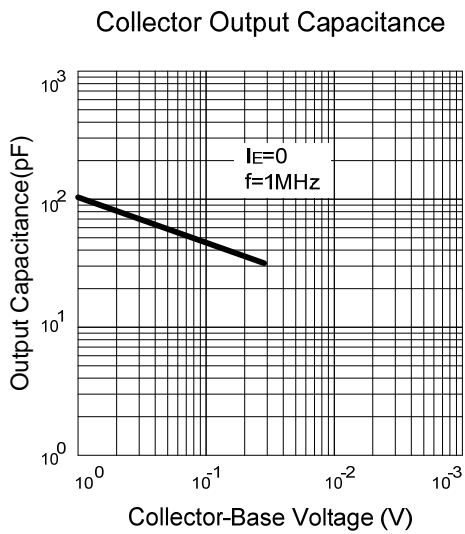
DC Current Gain



Saturation Voltage



■ TYPICAL CHARACTERISTICS(Cont.)



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