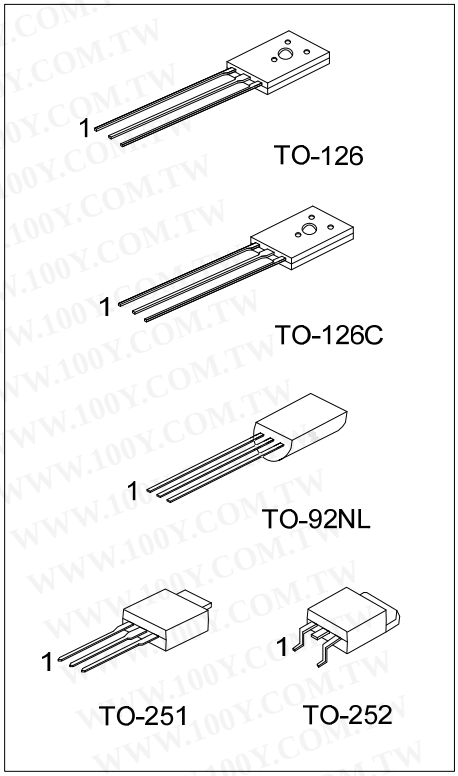
2SB772

PNP SILICON TRANSISTOR

MEDIUM POWER LOW VOLTAGE TRANSISTOR



Lead-free: 2SD772L
Halogen-free: 2SD772G

■ DESCRIPTION

The UTC **2SB772** 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 2SD882

■ ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
2SB772-x-T60-K	2SB772L-x-T60-K	2SB772G-x-T60-K	TO-126	E	C	B	Bulk
2SB772-x-T6C-K	2SB772L-x-T6C-K	2SB772G-x-T6C-K	TO-126C	E	C	B	Bulk
2SB772-x-TM3-T	2SB772L-x-TM3-T	2SB772G-x-TM3-T	TO-251	B	C	E	Tube
2SB772-x-TN3-R	2SB772L-x-TN3-R	2SB772G-x-TN3-R	TO-252	B	C	E	Tape Reel
2SB772-x-T9N-B	2SB772L-x-T9N-B	2SB772G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SB772-x-T9N-K	2SB772L-x-T9N-K	2SB772G-x-T9N-K	TO-92NL	E	C	B	Bulk

2SB772L-x-T60-K
(1)Packing Type
(2)Package Type
(3)Rank
(4)Lead Plating

(1) K: Bulk, T: Tube, R: Tape Reel
(2) T60: TO-126, T6C: TO-126C, TM3: TO-251, TN3: TO-252, T9N: TO-92NL
(3) x: refer to Classification of h_{FE2}
(4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn

■ ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

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
Collector Current	DC	I_C	-3	A
	Pulse	I_{CP}	-7	A
Base Current		I_B	-0.6	A
Collector Dissipation (Ta=25℃)	TO-92NL	P_C	0.5	W
	TO-251/TO-252/ TO-126/TO-126C		1	W
Junction Temperature		T_J	+150	℃
Storage Temperature		T_{STG}	-55 ~ +150	℃

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℃, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=-100μA, I_E=0	-40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=-1mA, I_B=0	-30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=-100μA, I_C=0	-5			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-30V ,I_E=0			-1000	nA
Collector Cut-Off Current	I_{CEO}	V_{CE}=-30V ,I_B=0			-1000	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-3V, I_C=0			-1000	nA
DC Current Gain(Note 1)	h_{FE1}	V_{CE}=-2V, I_C=-20mA	30	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	Cob	V_{CB}=-10V, I_E=0,f=1MHz		45		pF

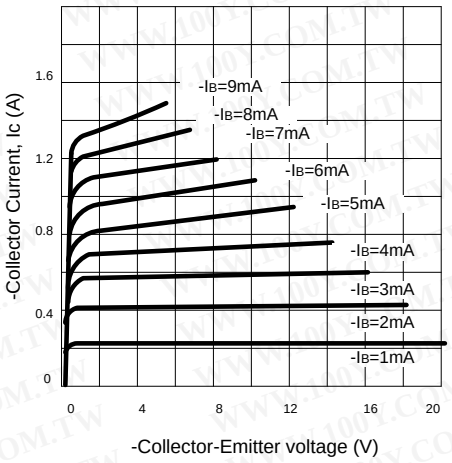
Note 1: Pulse test: P_W<300μs, Duty Cycle<2%

■ CLASSIFICATION OF h_{FE2}

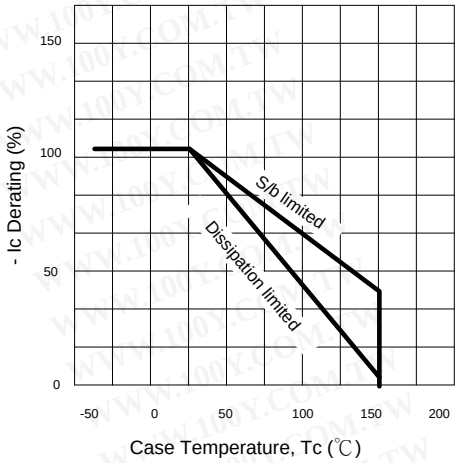
RANK	Q	P	E
RANGE	100 ~ 200	160 ~ 320	200 ~ 400

■ TYPICAL CHARACTERICS

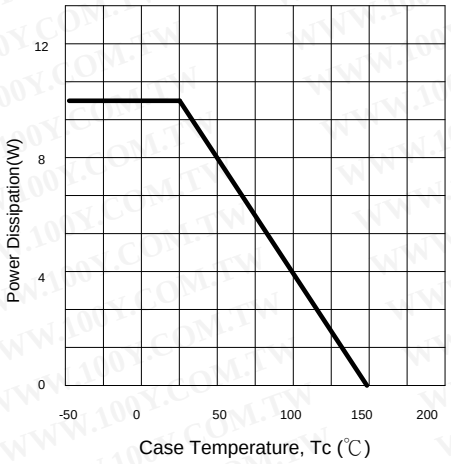
Static Characteristics



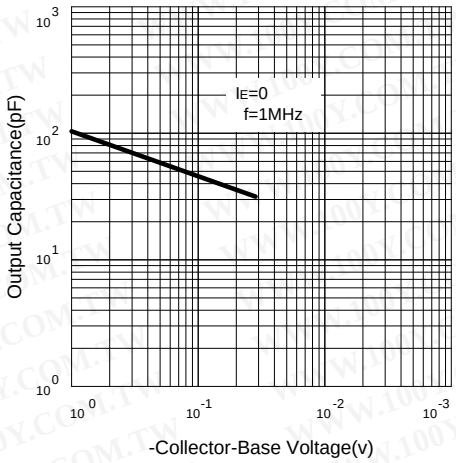
Derating Curve of Safe Operating Areas



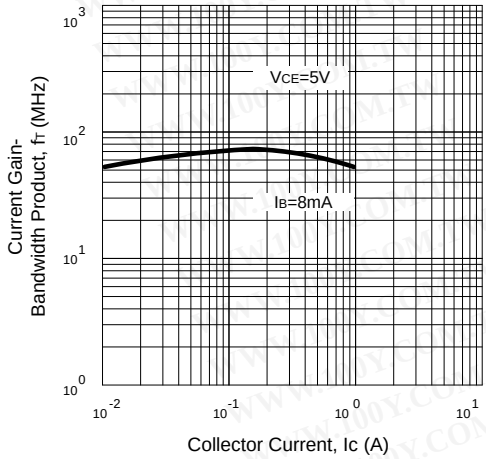
Power Derating



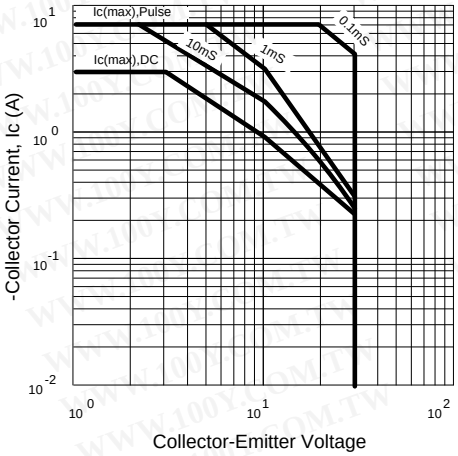
Collector Output Capacitance



Current Gain-
Bandwidth Product

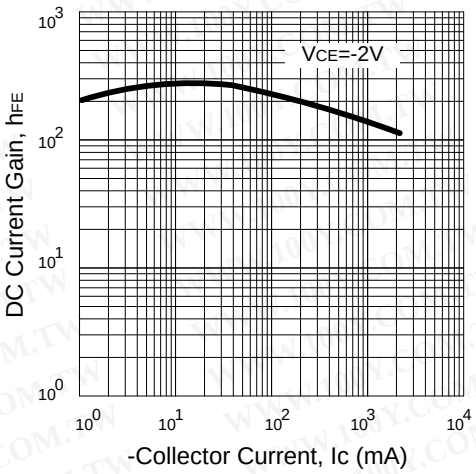


Safe Operating Area



■ TYPICAL CHARACTERICS(Cont.)

DC Current Gain



Saturation Voltage