



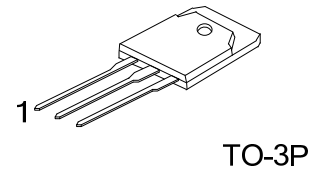
2SB688

PNP SILICON TRANSISTOR

SILICON PNP TRANSISTORS

DESCRIPTION

The UTC **2SB688** is a silicon PNP transistor in TO-3 metal case. It is intended for power switching circuits, series and shunt regulators, output stages and high fidelity amplifiers.



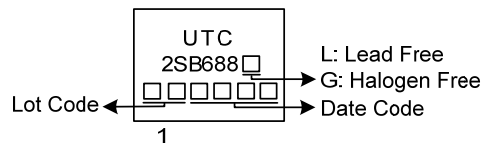
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB688L-x-T3P-T	2SB688G-x-T3P-T	TO-3P	B	C	E	Tube

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

2SB688G-x-T3P-T (1) Packing Type (2) Package Type (3) Rank (4) Green Package	(1) T: Tube (2) T3P: TO-3P (3) x: reference to Classification of h_{FE} (4) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



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

PARAMETERS	SYMBOL	RATINGS	UNITS
Collector-Base Voltage	V_{CBO}	-120	V
Collector-Emitter Voltage	V_{CEO}	-120	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-10	A
Base Current	I_B	-1	A
Collector Power Dissipation ($T_C=25^{\circ}\text{C}$)	P_C	80	W
Max. Operating Junction Temperature	T_J	+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-40 ~ +200	$^{\circ}\text{C}$

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.

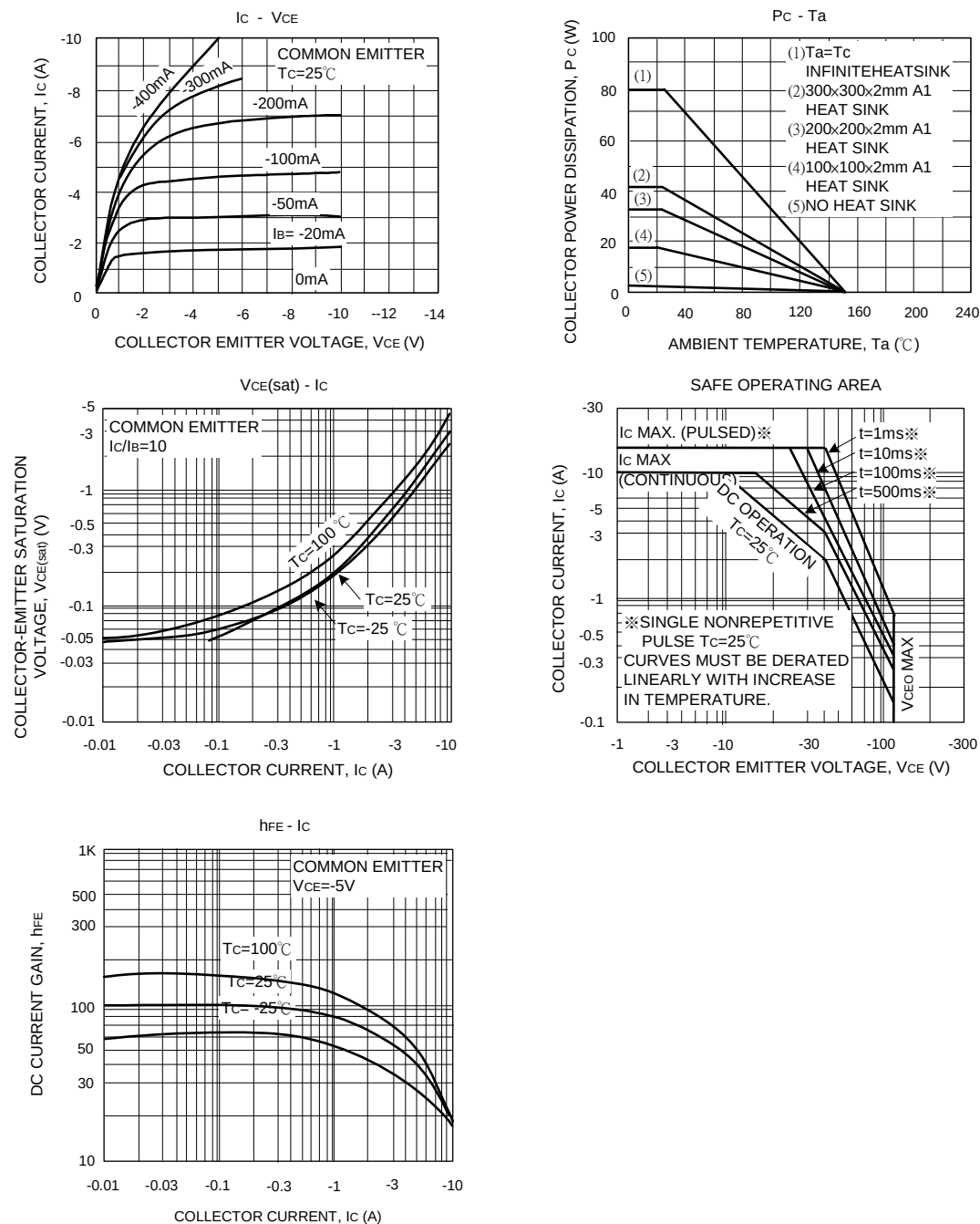
■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -120\text{V}$, $I_E = 0$			-10	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-10	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -50\text{mA}$, $I_B = 0$	-120			V
DC Current Gain	h_{FE}	$V_{CE} = -5\text{V}$, $I_C = -1\text{A}$	55		160	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -5\text{A}$, $I_B = -0.5\text{A}$			-2.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -5\text{A}$, $I_C = -5\text{A}$			-1.5	V
Transition Frequency	f_T	$V_{CE} = -5\text{A}$, $I_C = -1\text{A}$		10		MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f=1\text{MHz}$		280		pF

■ CLASSIFICATION OF h_{FE}

RANK	R	O
RANGE	55 ~ 110	80 ~ 160

■ TYPICAL CHARACTERISTICS



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