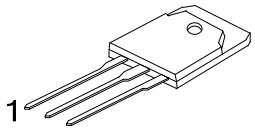
2SB688

PNP SILICON TRANSISTOR

SILICON PNP TRANSISTORS



TO-3P

■ 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.

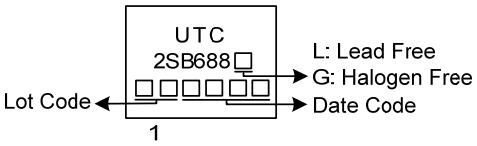
■ ORDERING INFORMATION

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

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°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°C)	P_C	80	W
Max. Operating Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-40 ~ +200	°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°C, unless otherwise specified)

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

■ CLASSIFICATION OF h_{FE}

RANK	R	O
RANGE	55 ~ 110	80 ~ 160

■ TYPICAL CHARACTERISTICS