

LOW FREQUENCY PNP TRANSISTOR

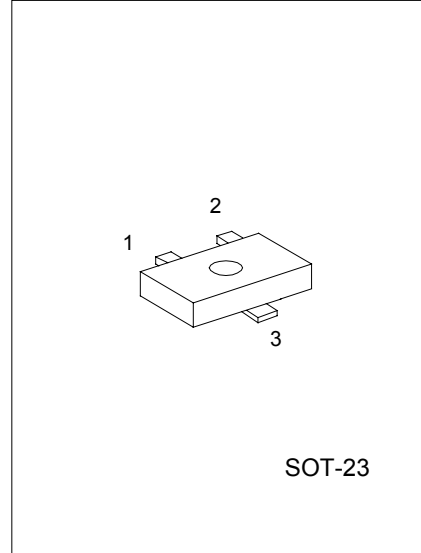
DESCRIPTION

The UTC 2SB1198 is an epitaxial planar type PNP silicon transistor.

FEATURES

*High breakdown voltage : $BV_{CEO} = -80V$

*Low $V_{CE(sat)}$: $V_{CE(sat)} = -0.2V$ (Typ)
($I_C/I_B = -0.5A/-50mA$)



1:EMITTER 2:BASE 3: COLLECTOR

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}C$)

PARAMETER	SYMBOL	LIMITS	UNIT
Collector-Base Voltage	V_{CB0}	-80	V
Collector-Emitter Voltage	V_{CEO}	-80	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-0.5	A
Collector Power Dissipation	P_C	0.2	W
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}C$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV_{CB0}	$I_C = -50 \mu A$	-80			V
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = -2mA$	-80			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E = -50 \mu A$	-5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -50V$			-0.5	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4V$			-0.5	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C/I_B = -0.5A/-50mA$		-0.2	-0.5	V
DC Current Transfer Ratio	h_{FE}	$V_{CE} = -3V, I_C = -0.1A$	120		390	
Transition Frequency	f_T	$V_{CE} = -10V, I_E = 50 mA, f = 100MHz$		180		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0 A, f = 1MHz$		11		pF

CLASSIFICATION OF h_{FE}

RANK	Q	R
RANGE	120-270	180-390
MARKING	AKQ	AKR

ELECTRICAL CHARACTERISTICS CURVES

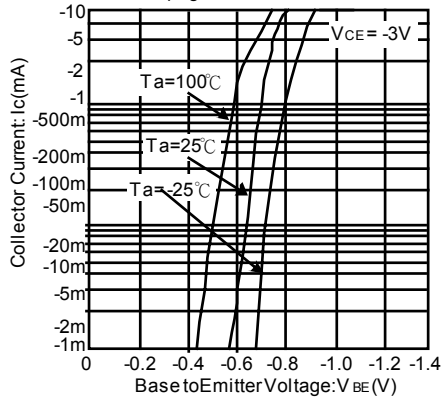
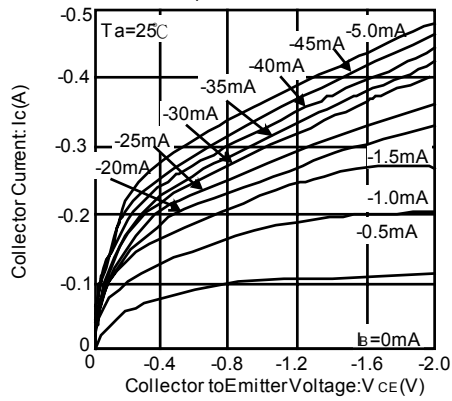
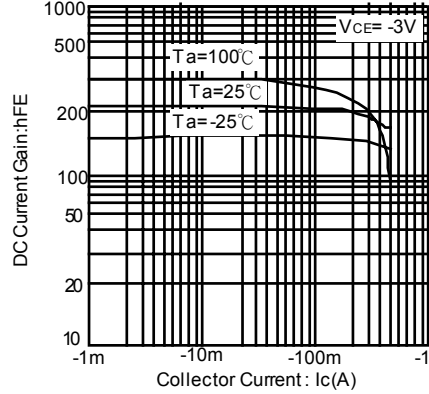
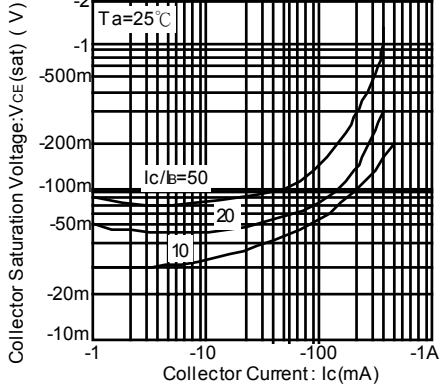
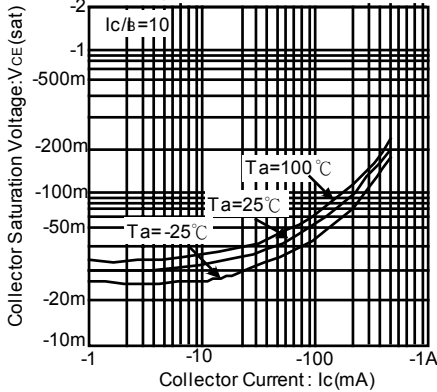
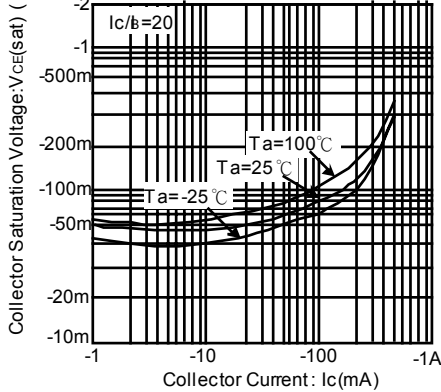
Figure 1. Grounded Emitter
Propagation CharacteristicsFigure 2. Grounded Emitter
Output CharacteristicsFigure 3. DC Current Gain
vs. Collector CurrentFigure 4. Collector-emitter Saturation
Voltage vs. Collector Current (I)Figure 5. Collector-emitter Saturation
Voltage vs. Collector Current (II)Figure 6. Collector-emitter Saturation
Voltage vs. Collector Current (III)

Figure 7. Collector-emitter Saturation Voltage vs. Collector Current (IV)

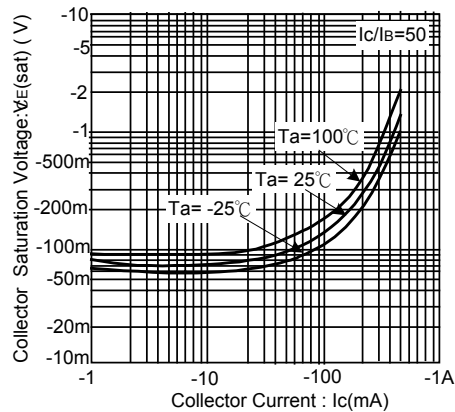
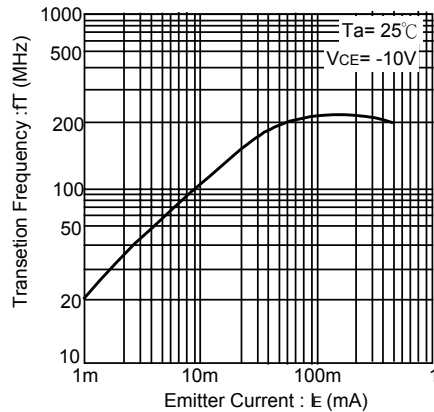
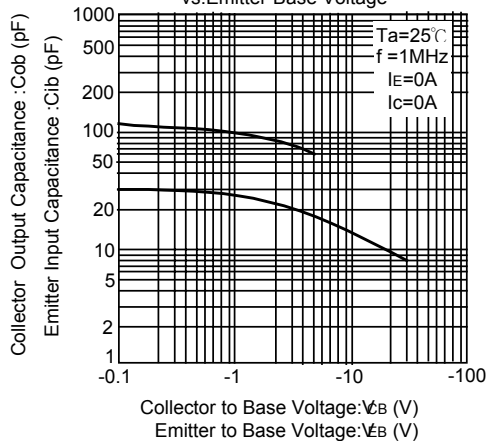


Figure 8. Gain Bandwidth Product vs. Emitter Current

Figure 9. Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage

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