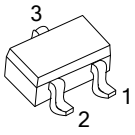
2SB1198

PNP EPITAXIAL SILICON TRANSISTOR

LOW FREQUENCY PNP TRANSISTOR



SOT-23

■ 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)

■ ORDERING INFORMATION

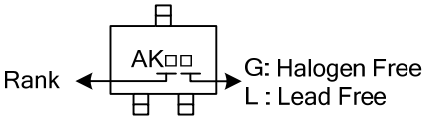
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB1198L-x-AE3-R	2SB1198G-x-AE3-R	SOT-23	E	B	C	Tape Reel

Note: xx: Output Voltage, refer to Marking Information.

2SB1198L-x-AE3-R
(1)Packing Type
(2)Package Type
(3)Rank
(4)Lead Free

(1) R: Tape Reel
(2) AE3: SOT-23
(3) x: refer to Classification of h_{FE}
(4) G: Halogen Free, L: Lead Free

■ MARKING



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■ ABSOLUTE MAXIMUM RATING (Ta=25℃)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-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	℃
Storage Temperature	T_{STG}	-40 ~ +150	℃

Note 1. 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.

2. The device is guaranteed to meet performance specification within 0℃~70℃ operating temperature range and assured by design from –20℃~85℃.

■ ELECTRICAL CHARACTERISTICS (Ta=25℃, unless otherwise specified

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV_{CBO}	I_C= -50μA	-80			V
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C= -2mA	-80			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E= -50μA	-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

■ TYPICAL CHARACTERISTICS

Figure 1. Grounded Emitter Propagation Characteristics

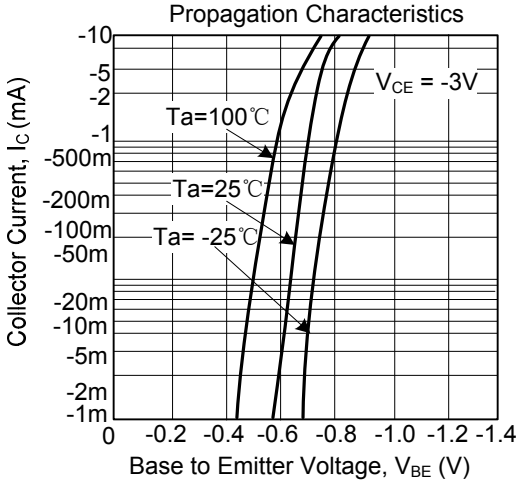


Figure 2. Grounded Emitter Output Characteristics

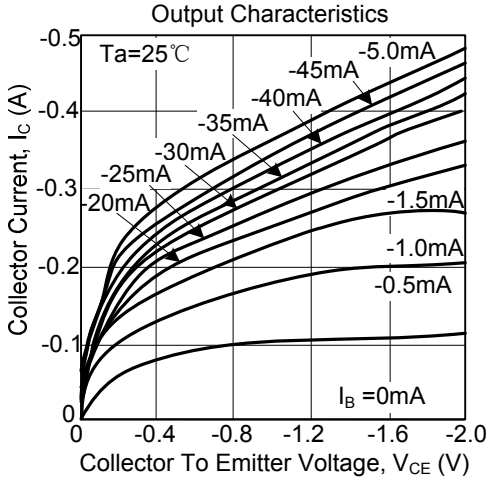


Figure 3. DC Current Gain vs.Collector Current

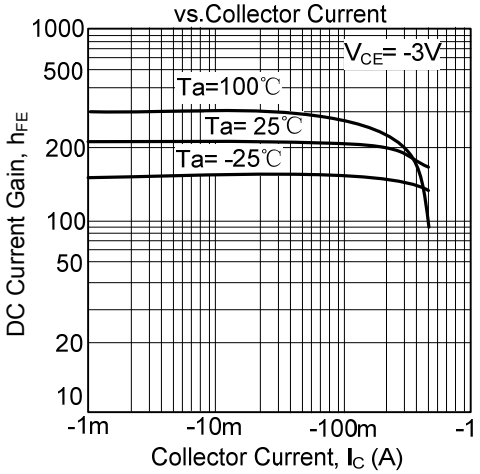


Figure 4. Collector-Emitter Saturation Voltage vs. Collector Current (I)

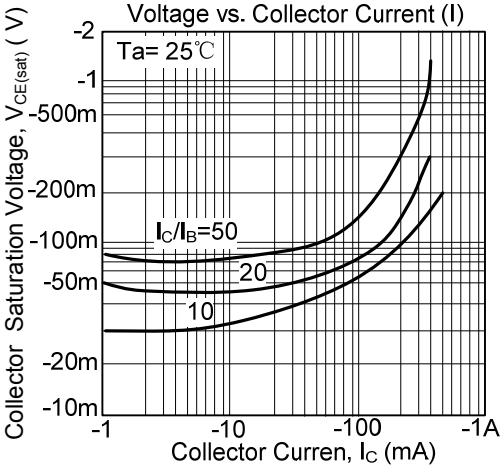


Figure 5. Collector-emitter Saturation Voltage vs. Collector Current (II)

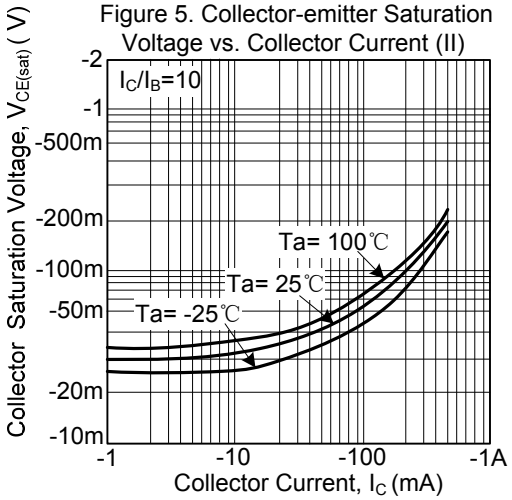
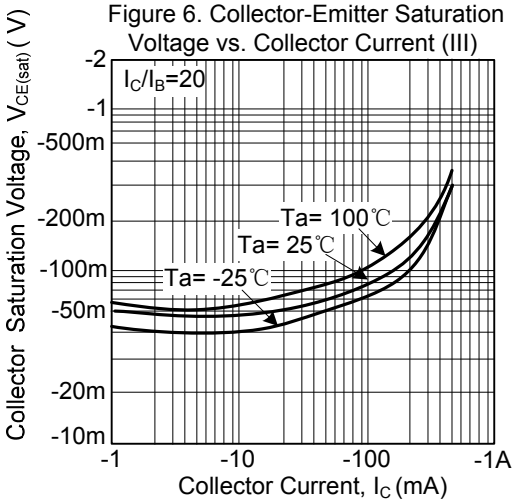


Figure 6. Collector-Emitter Saturation Voltage vs. Collector Current (III)



■ TYPICAL CHARACTERISTICS(Cont.)

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

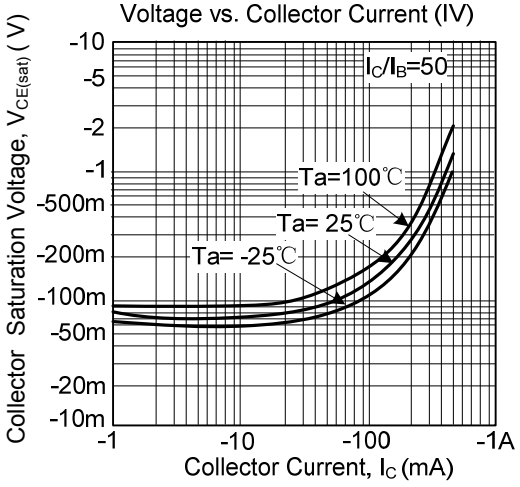


Figure 8. Gain Bandwidth Product vs. Emitter Current

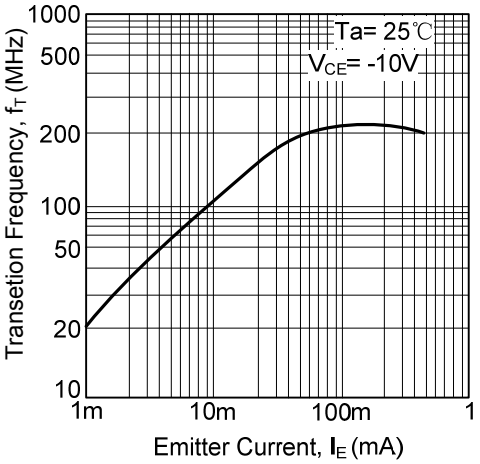
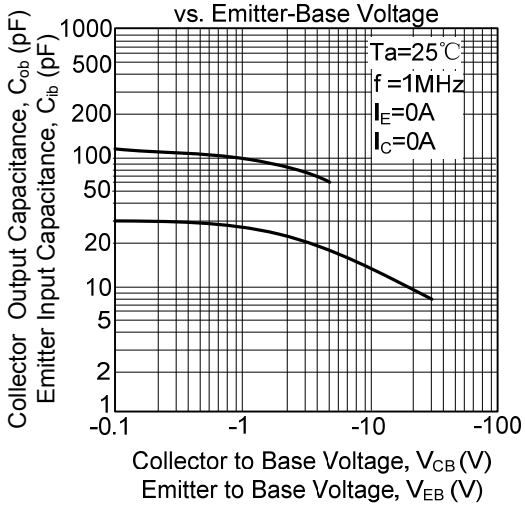


Figure 9. Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage



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