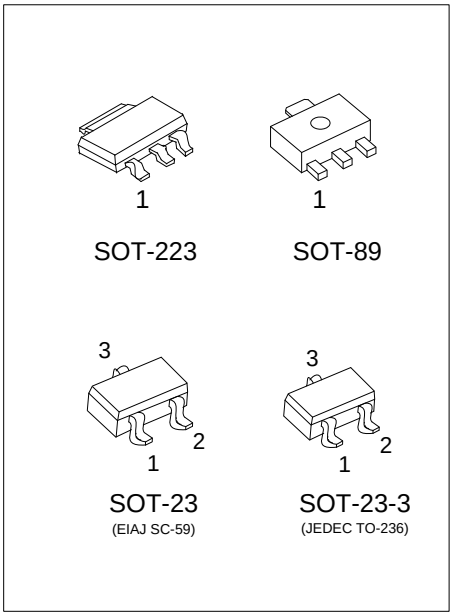
2SD1898

NPN SILICON TRANSISTOR

POWER TRANSISTOR



■ FEATURES

*High V_{CEO}= 80V
*High I_C= 1A (DC)
*Good h_{FE} linearity
*Low $V_{CE(SAT)}$
*Complements the 2SB1260

■ ORDERING INFORMATION

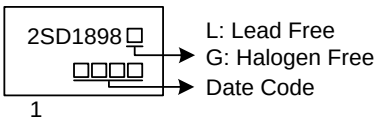
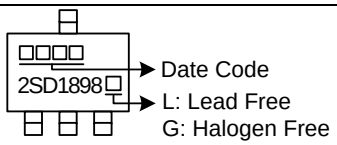
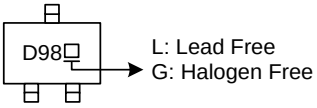
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD1898L-x-AA3-R	2SD1898G-x-AA3-R	SOT-223	B	C	E	Tape Reel
2SD1898L-x-AB3-R	2SD1898G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SD1898L-x-AE2-R	2SD1898G-x-AE2-R	SOT-23-3	B	E	C	Tape Reel
2SD1898L-x-AE3-R	2SD1898G-x-AE3-R	SOT-23	B	E	C	Tape Reel

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

2SD1898G-x-AB3-R
(1)Packing Type
(2)Package Type
(3)Rank
(4)Green Package

(1) R: Tape Reel
(2) AA3: SOT-223, AB3: SOT-89, AE2: SOT-23-3
AE3: SOT-23
(3) x: refer to Classification of h_{FE}
(4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

SOT-223	SOT-89	SOT-23-3 / SOT-23
		

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	100	V
Collector-Emitter Voltage		V_{CEO}	80	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current(DC)		I_C	1	A
Collector Current(PULSE) (Note 2)		I_{CP}	2	A
Collector Power Dissipation (Note 3)	SOT-223	P_C	1000	mW
	SOT-89		500	mW
	SOT-23-3 SOT-23		300	mW
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

Notes: 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. Duty = 1/2, P_W = 200ms
3. When mounted on a 40×40×0.7 mm ceramic board.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

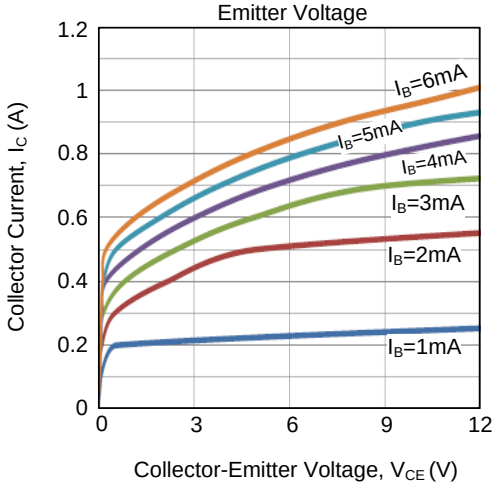
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	BV_{CBO}	I_C= 50μA	100			V
Collector Emitter Breakdown Voltage	BV_{CEO}	I_C= 1mA	80			V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=50μA	5			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=80V, I_E=0A			1	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4V , I_C=0A			1	μA
DC Current Transfer Ratio	h_{FE}	V_{CE}=3V, I_C= 0.5A	82		390	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=500mA, I_B= 20mA		0.15	0.4	V
Transition Frequency	f_T	V_{CE}=10V, I_E= -50mA, f=100MHz		100		MHz
Output Capacitance	C_{OB}	V_{CB}= 10V, I_E= 0A, f=1MHz		20		pF

■ CLASSIFICATION OF h_{FE}

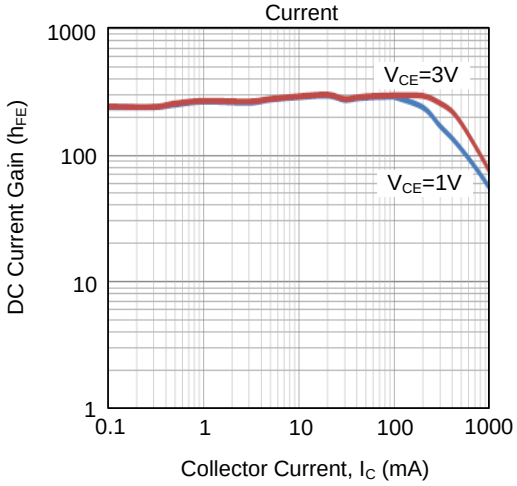
RANK	P	Q	R
RANGE	82-180	120-270	180-390

■ TYPICAL CHARACTERISTICS

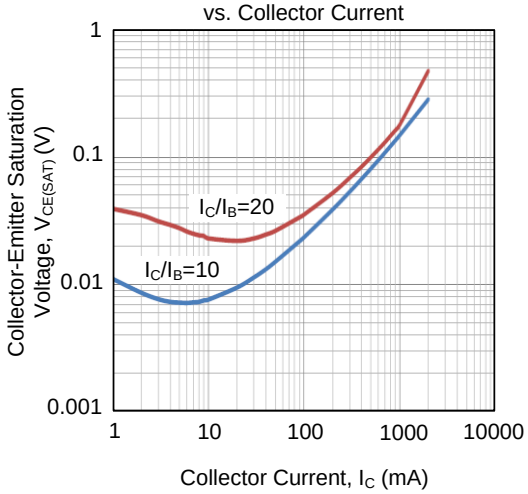
Collector Current vs. Collector-Emitter Voltage



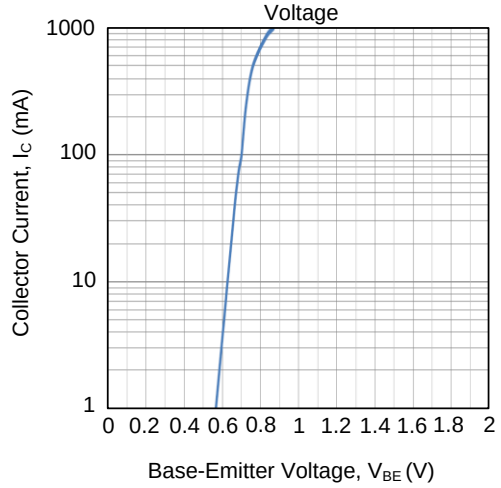
DC Current Gain vs. Collector Current



Collector-Emitter Saturation Voltage vs. Collector Current



Collector Current vs. Base-Emitter Voltage



Collector output capacitance vs Collector-Base voltage Emitter input capacitance vs Emitter-Base voltage