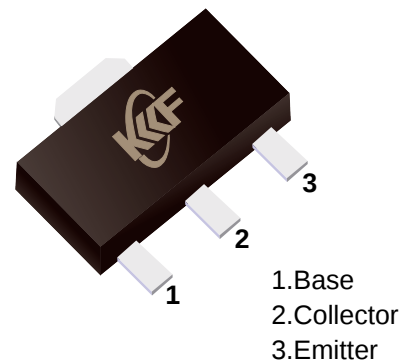


2SD1898

■ NPN Transistors

■ Features

- High V_{CEO} , $V_{CEO}=80V$
- High I_C , $I_C=1A$ (DC)
- Low $V_{CE(sat)}$
- Complementary to 2SB1260



■ Simplified outline(SOT-89)

■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	120	V
Collector - Emitter Voltage	V_{CEO}	80	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	2	
Collector Power Dissipation	P_C	0.5	W
		2	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu A$, $I_E = 0$	120			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 mA$, $I_B = 0$	80			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 100 V$, $I_E = 0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 V$, $I_C = 0$			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 mA$, $I_B = 50 mA$		0.15	0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 mA$, $I_B = 50 mA$			1.2	
DC current gain	h_{FE}	$V_{CE} = 3 V$, $I_C = 500 mA$	120		390	
Collector Output capacitance	C_{ob}	$V_{CB} = 10 V$, $I_E = 0$, $f = 1 MHz$		20		pF
Transition frequency	f_T	$V_{CE} = 10 V$, $I_E = -50 mA$, $f = 100 MHz$		100		MHz

■ Classification of h_{FE}

Type	2SD1898-Q	2SD1898-R
Range	120-270	180-390
Marking	DF Q*	DF R*

2SD1898

■ Typical Characteristics

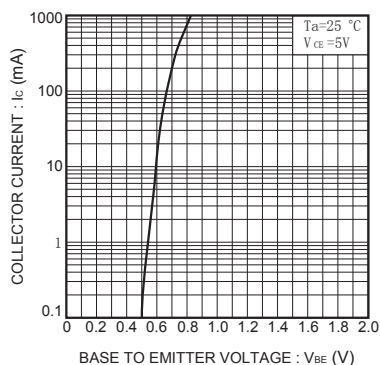


Fig.1 Grounded emitter propagation characteristics

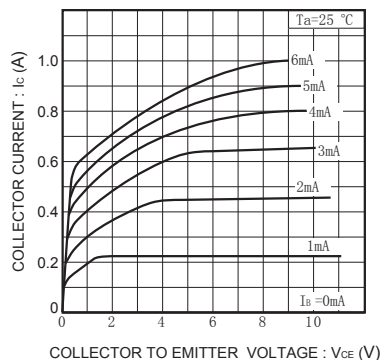


Fig.2 Grounded emitter output characteristics

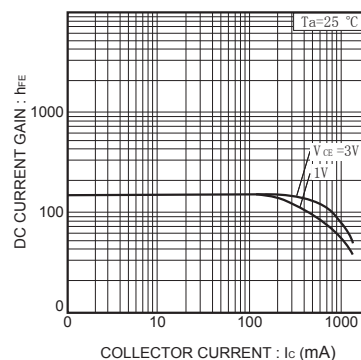


Fig.3 DC current gain vs. collector current

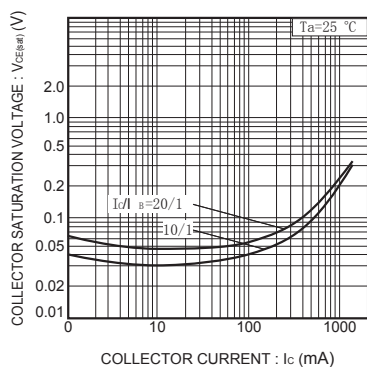


Fig.4 Collector-emitter saturation voltage vs. collector current

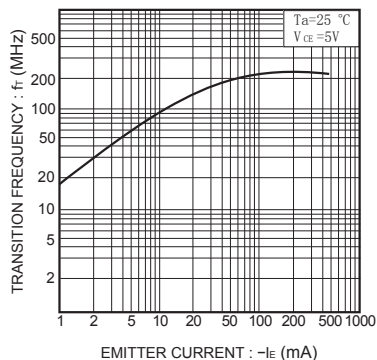


Fig.5 Gain bandwidth product vs. emitter current

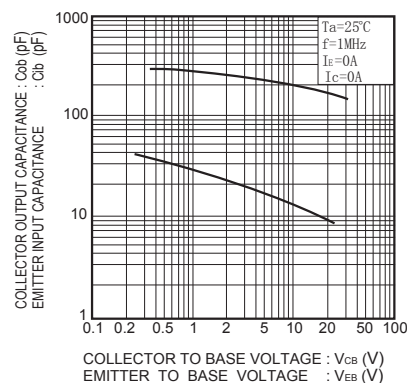


Fig.6 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

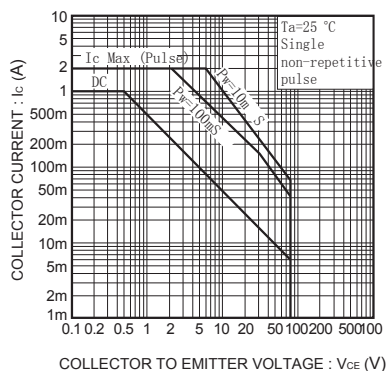
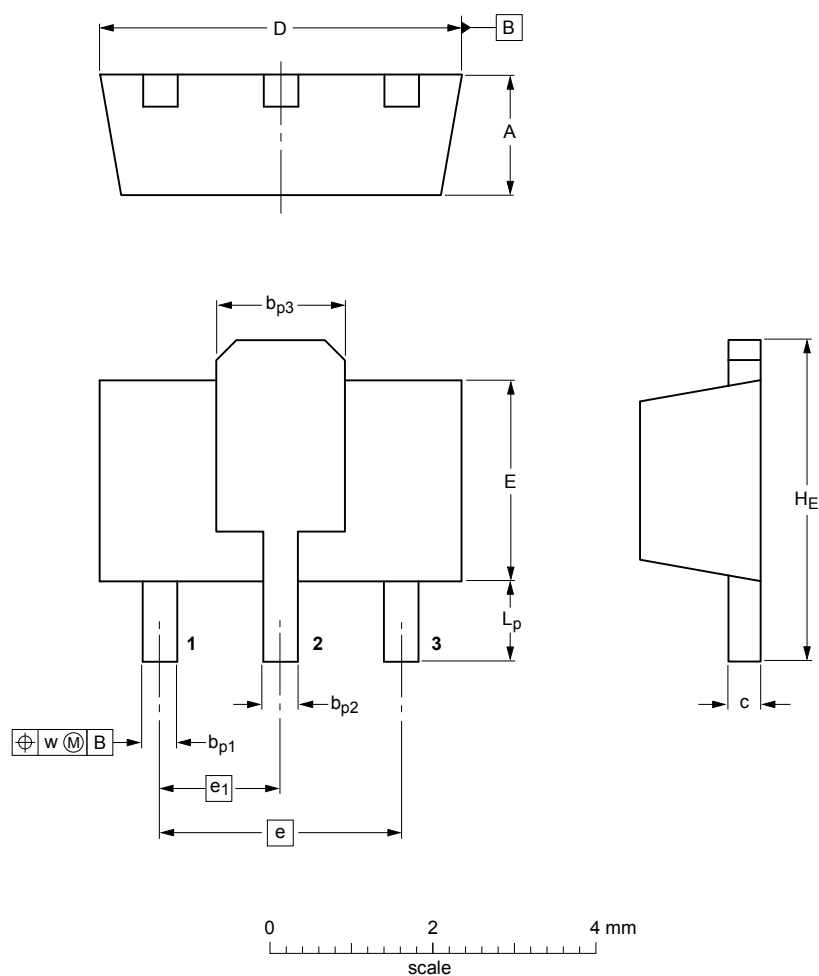


Fig.7 Safe operating area
(2SD1898)

2SD1898

■ SOT-89



DIMENSIONS (mm are the original dimensions)

UNIT	A	b _{p1}	b _{p2}	b _{p3}	c	D	E	e	e ₁	H _E	L _p	w
mm	1.6 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13