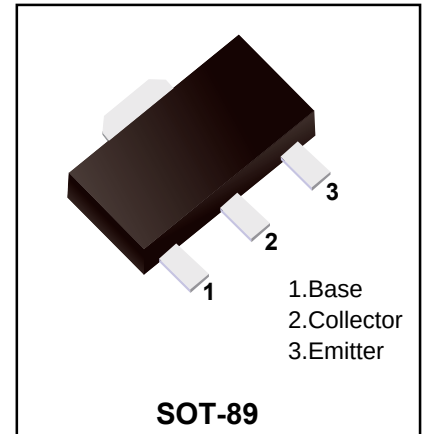


NPN Transistors

Features

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



Absolute Maximum Rating ($T_a=25^{\circ}C$)

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

h_{FE} Classification

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

Typical Characteristics

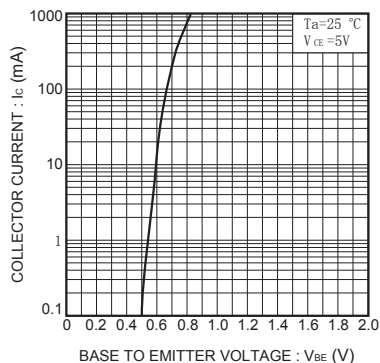


Fig.1 Grounded emitter propagation characteristics

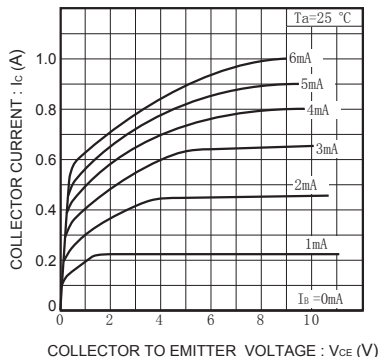


Fig.2 Grounded emitter output characteristics

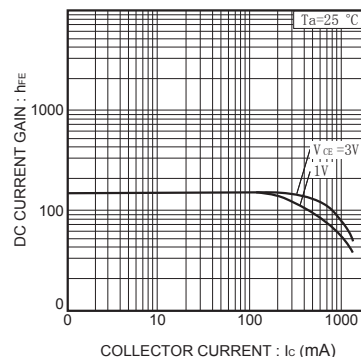


Fig.3 DC current gain vs. collector current

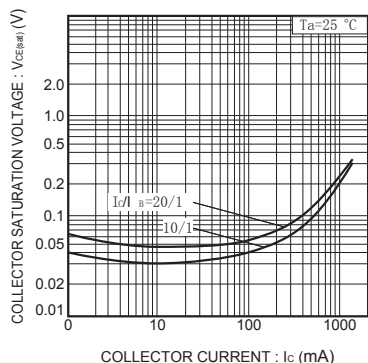


Fig.4 Collector-emitter saturation voltage vs. collector current

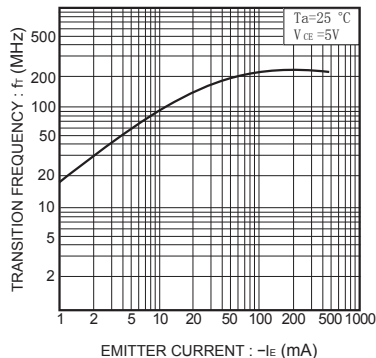


Fig.5 Gain bandwidth product vs. emitter current

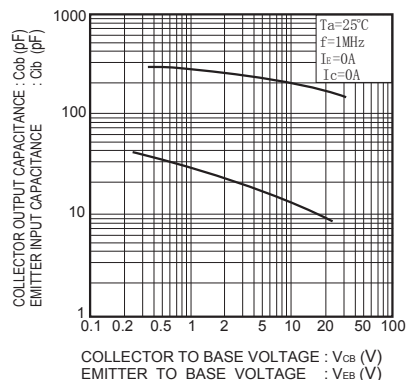


Fig.6 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

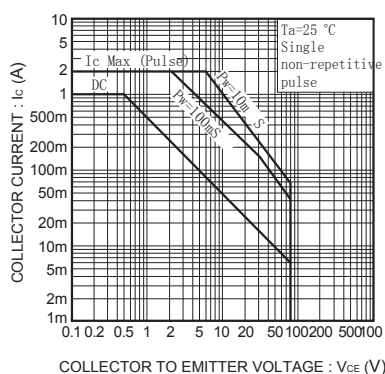


Fig.7 Safe operating area (2SD1898)

Ordering information

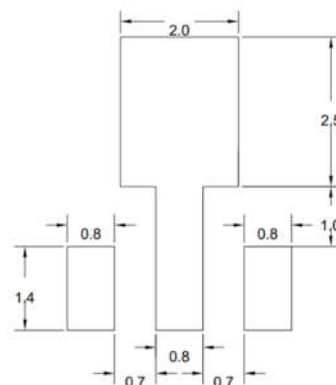
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-89

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

The recommended mounting pad size



UNIT:MM

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