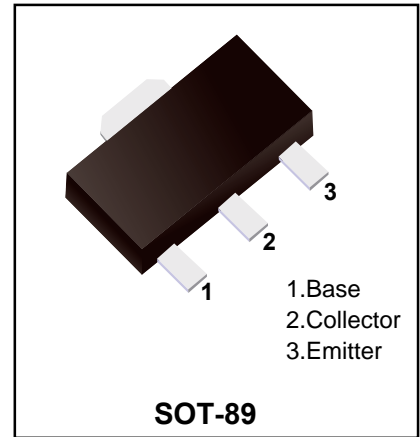


NPN Transistors



Features

- Excellent current-to-gain characteristics
- Low collector saturation voltage $V_{CE(sat)}$
- Complementary to 2SB1412

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	40	V
Collector - Emitter Voltage	V_{CE0}	20	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_c	3	A
Collector Power Dissipation	P_c	500	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 to 150	

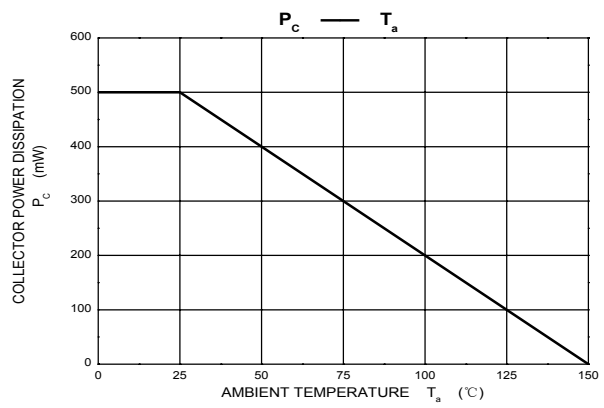
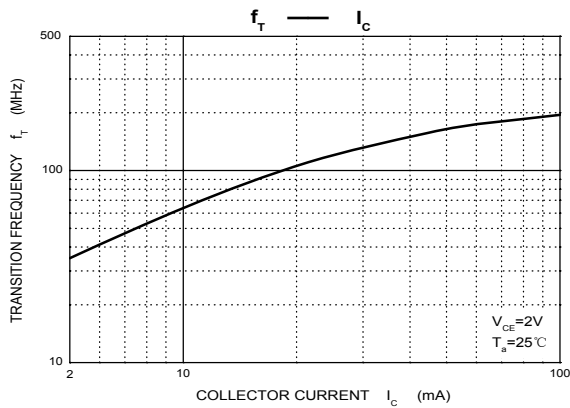
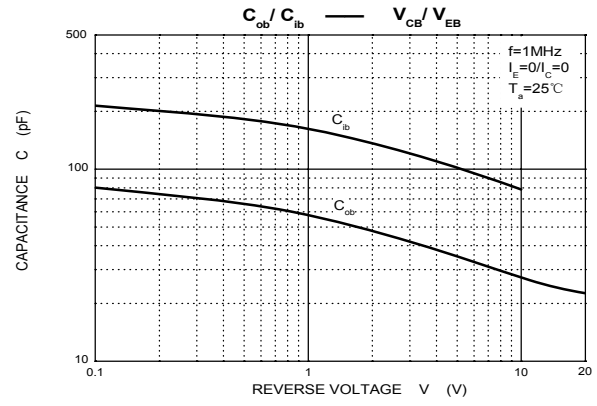
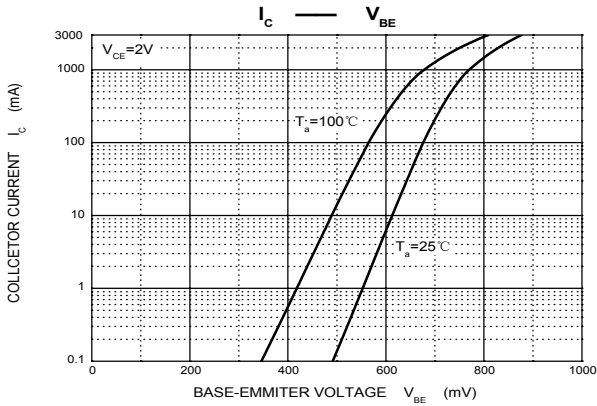
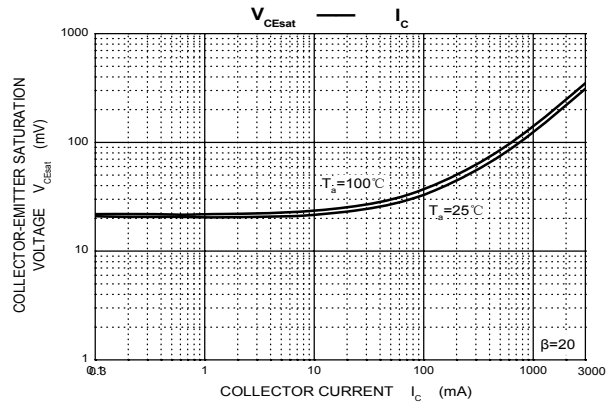
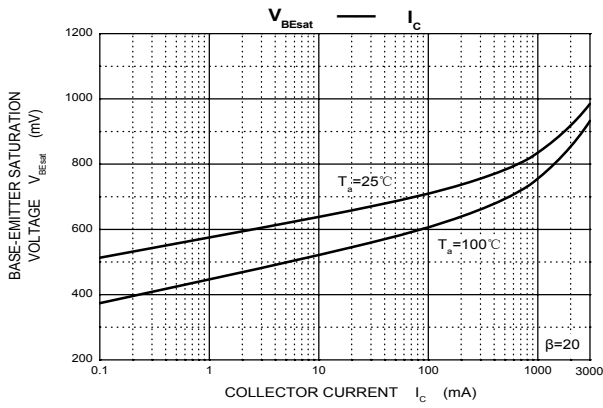
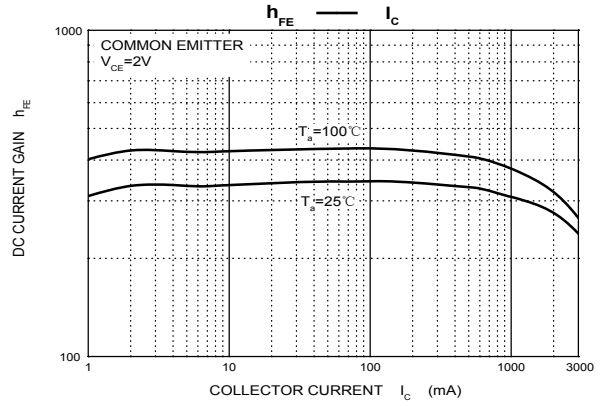
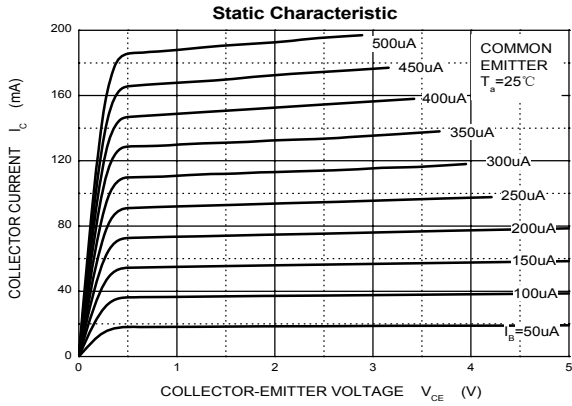
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_c = 100\mu A, I_E = 0$	40			V
Collector- emitter breakdown voltage	V_{CE0}	$I_c = 1\text{ mA}, I_B = 0$	20			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100\mu A, I_c = 0$	6			
Collector-base cut-off current	I_{cBO}	$V_{CB} = 35\text{ V}, I_E = 0$			0.1	uA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 2\text{ A}, I_B = 100\text{ mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 2\text{ A}, I_B = 100\text{ mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 2\text{ V}, I_c = 100\text{ mA}$	180		560	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		25		pF
Transition frequency	f_T	$V_{CE} = 2\text{ V}, I_c = 500\text{ mA}, f = 100\text{ MHz}$		290		MHz

h_{FE} Classification

Type	2SD2150-R	2SD2150-S
Range	180-390	270-560
Marking	CF R*	CF S*

Typical Characteristics



Ordering information

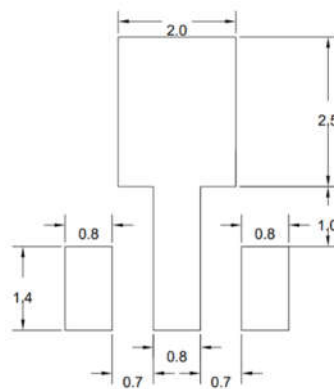
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel,7"reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

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

Disclaimer

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