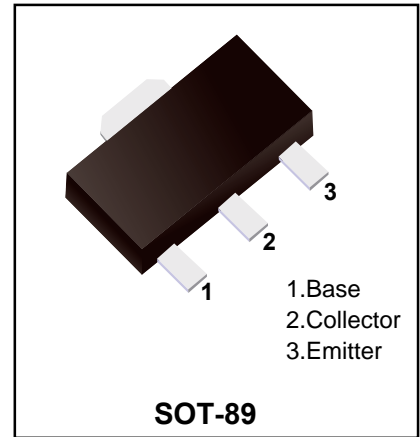


NPN Transistors



Features

- Low $V_{CE(sat)}$
- Compliments to 2SB1132

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	32	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC) Pw=20ms, duty=1/2	I_c	1	A
		2	A
Collector Power Dissipation	P_C *	0.5	W
Junction temperature	T_j	150	°C
Storage temperature Range	T_{stg}	-55 to +150	°C

* mounted on a 40x40x0.7mm ceramic board.

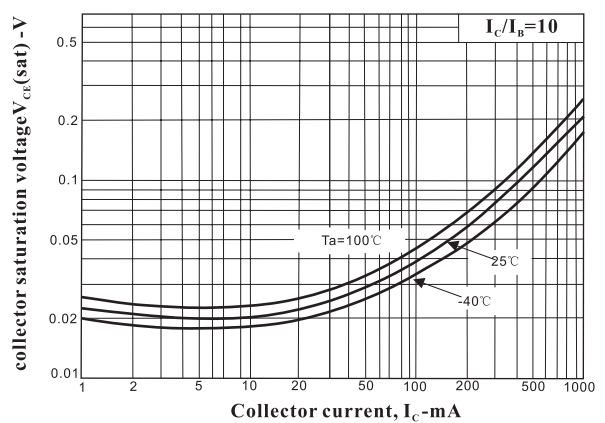
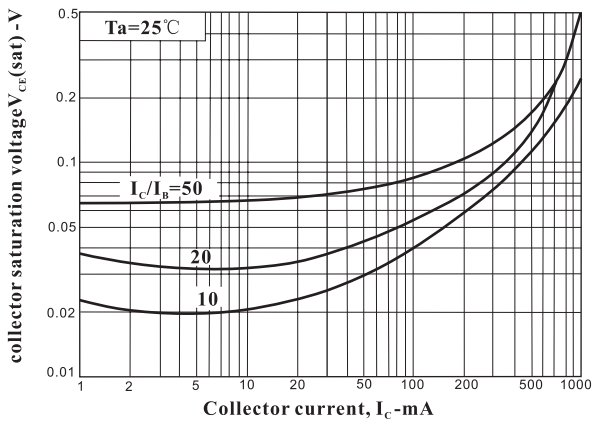
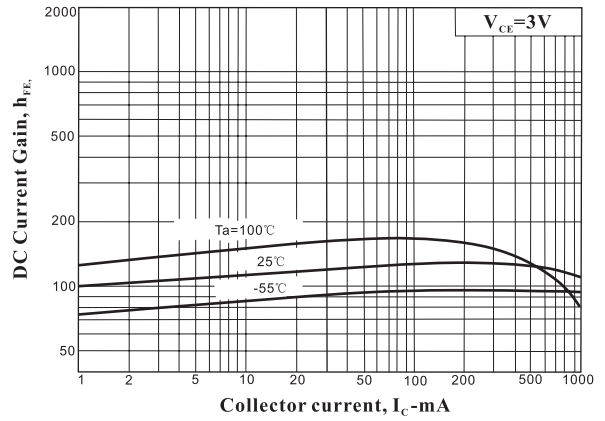
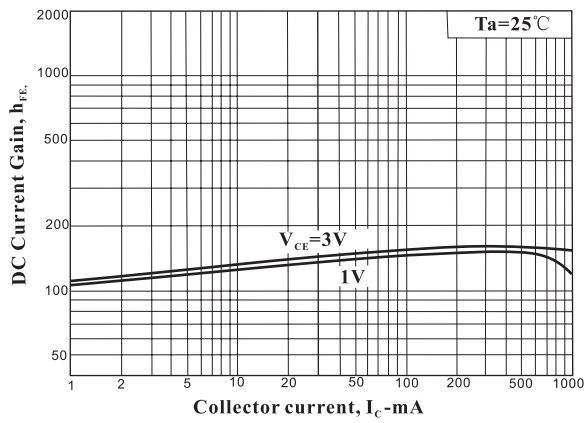
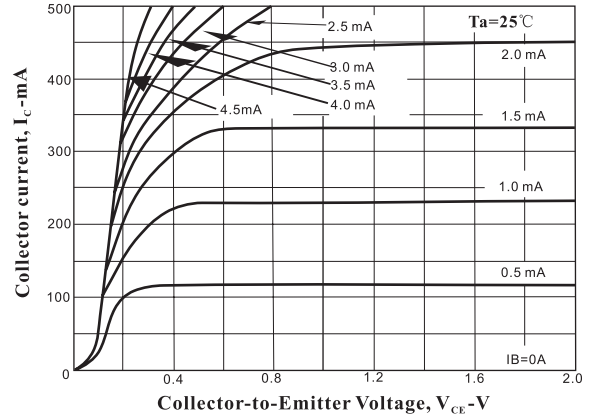
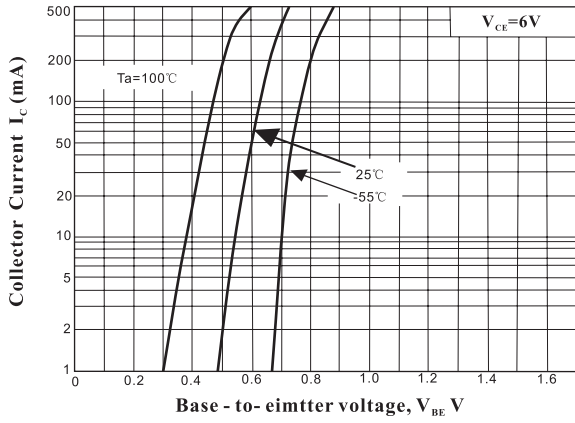
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_c = 50 \mu A, I_E = 0$	40			V
Collector- emitter breakdown voltage	V_{CEO}	$I_c = 1 mA, I_B = 0$	32			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 50 \mu A$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 20 V, I_E = 0$			0.5	uA
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
DC current gain	h_{FE}	$V_{CE} = 3 V, I_c = 100 mA$	82		390	
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$		15		pF
Transition frequency	f_r	$V_{CE} = 5 V, I_c = -50 mA, f = 100 MHz$		150		MHz

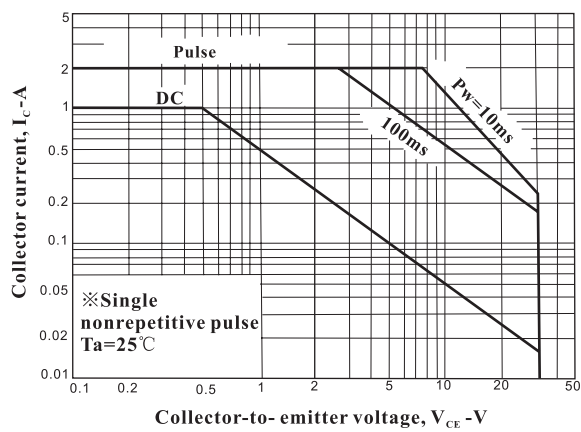
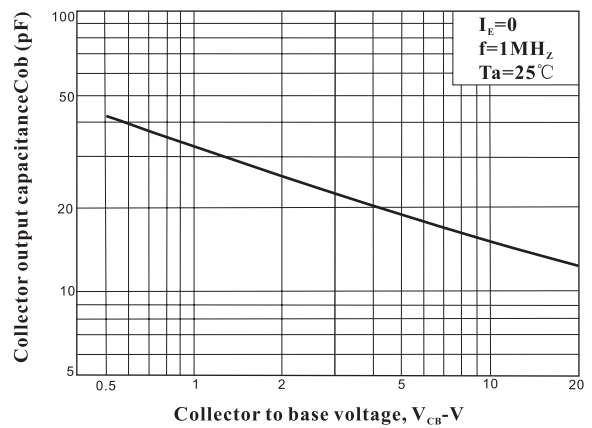
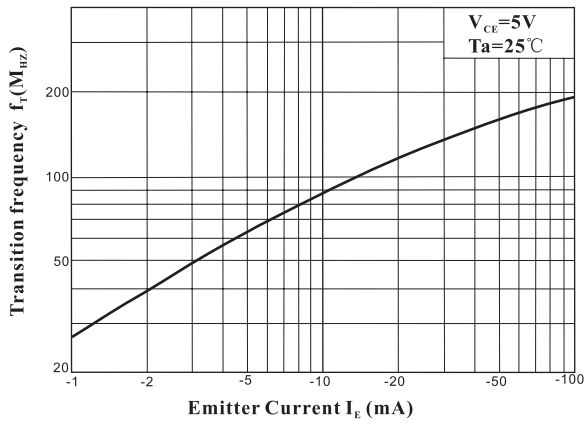
h_{FE} Classification

Type	2SD1664-P	2SD1664-Q	2SD1664-R
Range	82-180	120-270	180-390
Marking	DAP*	DAQ*	DAR*

Typical Characteristics



Typical Characteristics



Ordering information

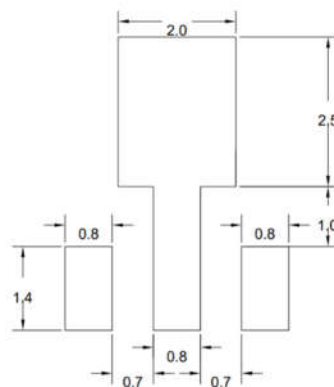
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

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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