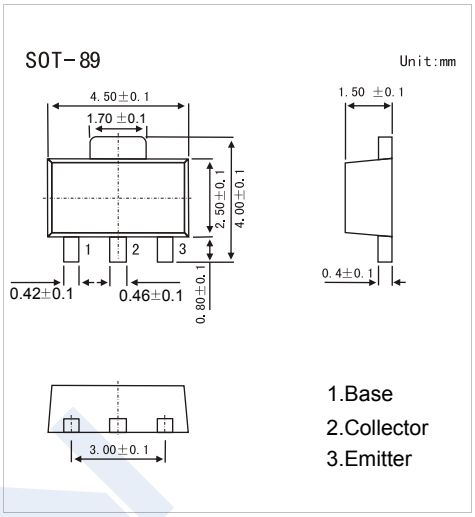
NPN Transistors
2SD1664-HF



■ Features

- Low $V_{CE(sat)}$
- Compliments to 2SB1132-HF
- Pb−Free Package May be Available. The G−Suffix Denotes a Pb−Free Lead Finish

■ Absolute Maximum Ratings Ta = 25℃

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)	I_C	1	A
P_W=20ms, duty=1/2		2	A
Collector Power Dissipation	P_C *	0.5	W
Jumction temperature	T_j	150	℃
Storage temperature Range	T_{stg}	-55 to +150	℃

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

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 50 μA, 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 μ 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}= 4V , I_C=0			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500 mA, I_B=50mA		0.15	0.4	V
DC current gain	h_{FE}	V_{CE}= 3V, I_C= 100mA	82		390	
Collector output capacitance	C_{ob}	V_{CB}= 10V, I_E= 0,f=1MHz		15		pF
Transition frequency	f_T	V_{CE}= 5V, I_C= -50mA,f=100MHz		150		MHz

■ h_{FE} Classification

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

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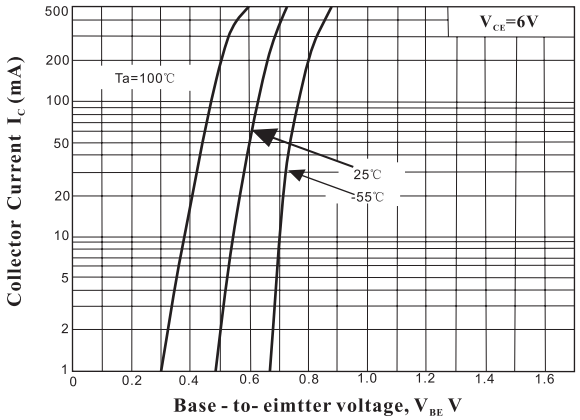
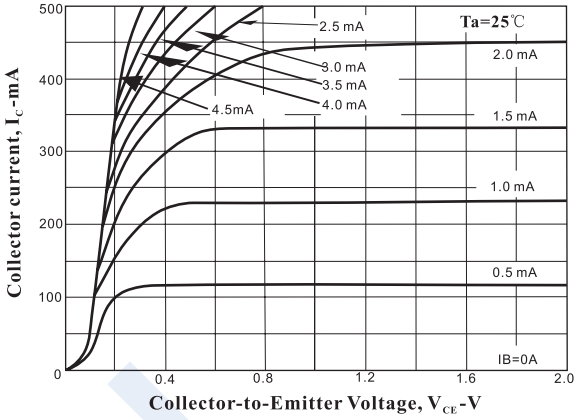
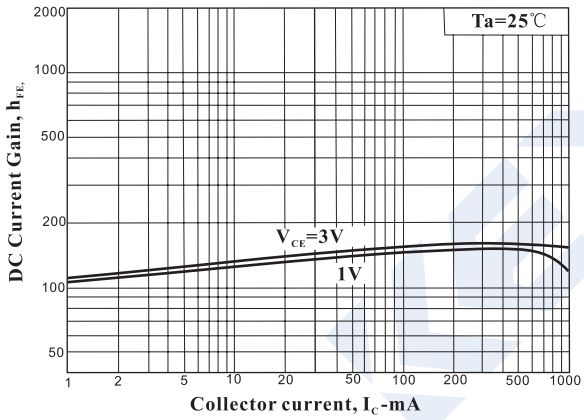
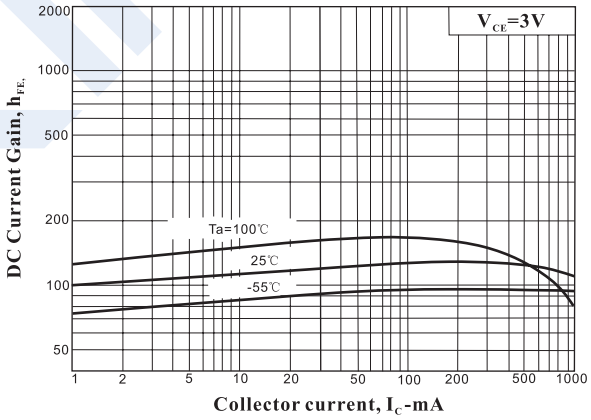
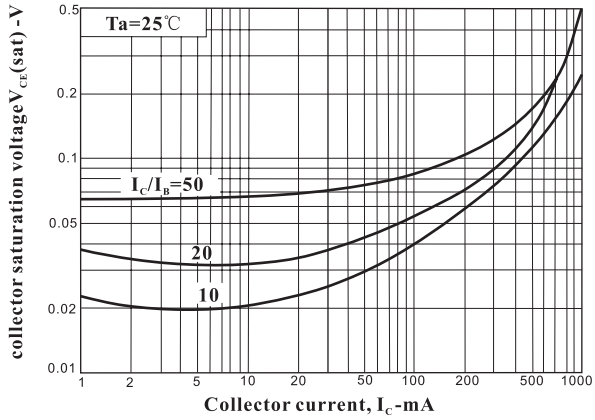
■ Typical Characterisitics

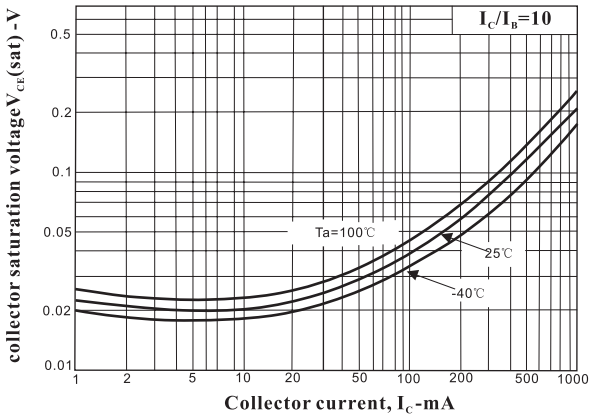












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■ Typical Characterisitics