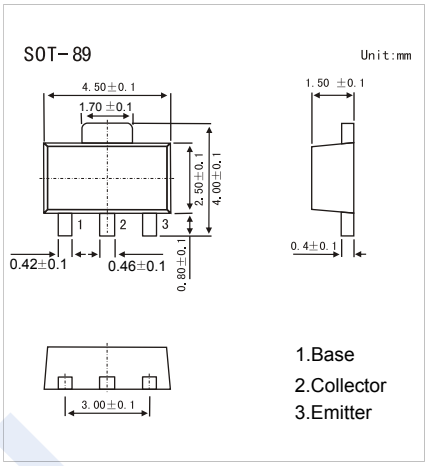
PNP Transistors

2SB1599



■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Complementary to 2SD2457

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-50	V
Collector - Emitter Voltage	V_{CEO}	-40	
Emitter - Base Voltage	V_{EBO}	-5	
Base Current	I_B	-0.6	A
Collector Current - Pulse	I_{CP}	-3	
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -1 mA, I_E=0	-50			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -10 mA, I_B=0	-40			
Emitter - base breakdown voltage	V_{EBO}	I_E= -1 mA, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -50V , I_E=0			-1	uA
Collector-emitter cut-off current	I_{CEO}	V_{CE}= -40V , I_B=0			-10	
Emitter cut-off current	I_{EBO}	V_{EB}= -5V , I_C=0			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-1.5 A, I_B=-150 mA		-0.4	-1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-2 A, I_B=-200 mA			-1.5	
DC current gain	h_{FE}	V_{CE}= -5V, I_C= -1 A	50		220	
Collector output capacitance	C_{ob}	V_{CB}= -5V, I_E= 0,f=1MHz		70		pF
Transition frequency	f_T	V_{CE}= -5V, I_E= 500 mA,f=200MHz		150		MHz

■ Classification of h_{fe}

Type	2SB1599-P	2SB1599-Q	2SB1599-R
Range	50-100	80-160	100-220
Marking	1XP	1XQ	1XR

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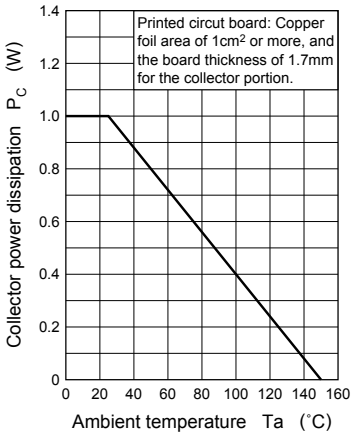
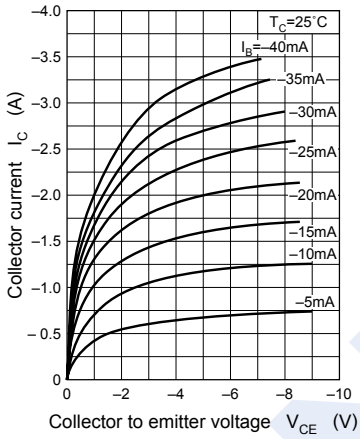
■ Typical Characterisitics

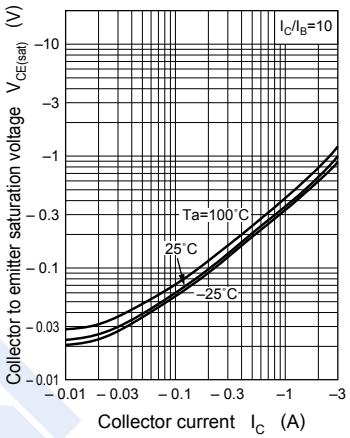
P_C — Ta



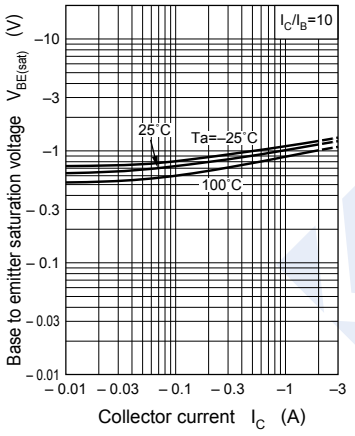
I_C — V_{CE}



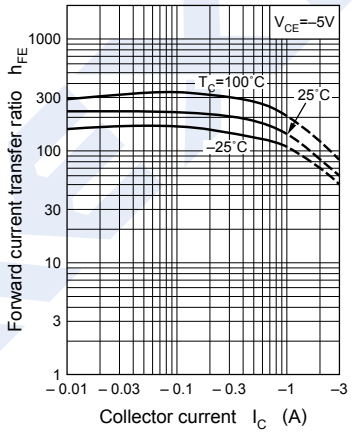
$V_{CE(sat)}$ — I_C



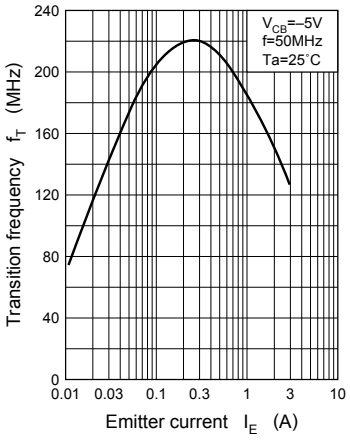
$V_{BE(sat)}$ — I_C



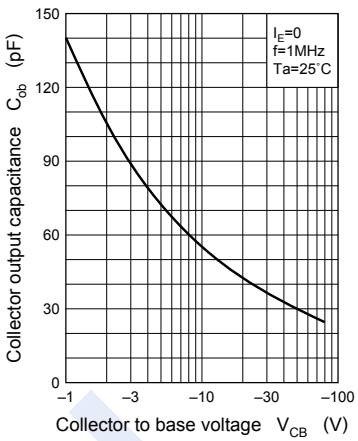
h_{FE} — I_C



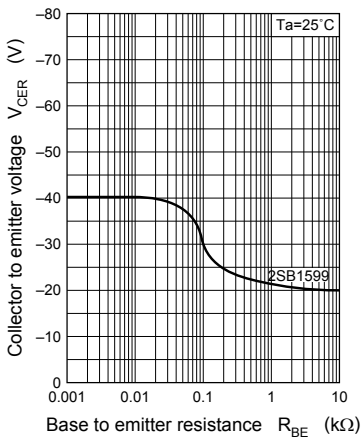
f_T — I_E



C_{ob} — V_{CB}



V_{CER} — R_{BE}



I_{CEO} — Ta