

TO-126 Plastic-Encapsulate Transistors

2SB1658 TRANSISTOR (PNP)

FEATURES

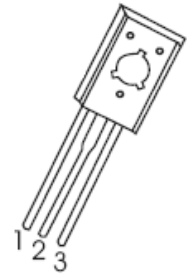
- Low $V_{CE(sat)}$
- High DC Current Gain

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-5	A
P_C	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	125	$^{\circ}\text{C/W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

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1. EMITTER
2. COLLECTOR
3. BASE



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -2\text{V}, I_C = -1\text{A}$	150		600	
	$h_{FE(2)}$	$V_{CE} = -2\text{V}, I_C = -4\text{A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -1\text{A}, I_B = -50\text{mA}$			-0.15	V
	$V_{CE(sat)2}$	$I_C = -2\text{A}, I_B = -100\text{mA}$			-0.25	V
	$V_{CE(sat)3}$	$I_C = -4\text{A}, I_B = -200\text{mA}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1\text{A}, I_B = -100\text{mA}$			-1.5	V
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		100		pF
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$		95		MHz