

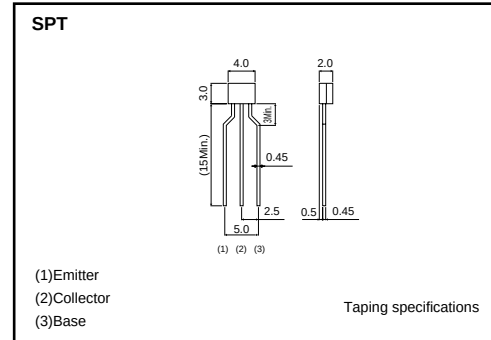
High-voltage Amplifier Transistor (–210V, –30mA)

2SA821S

●Features

- 1) High breakdown voltage, ($V_{CE} = -210V$)
- 2) Complements the 2SC1651S.

●External dimensions (Unit : mm)



●Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–210	V
Collector-emitter voltage	V_{CES}	–210	V *
Emitter-base voltage	V_{EBO}	–5	V
Collector current	I_C	–30	A
Collector power dissipation	P_C	250	W
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	–55 to +150	$^\circ\text{C}$

* $R_{BE} = 10k\Omega$

●Electrical characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	–210	–	–	V	$I_C = -50\mu\text{A}$
Collector-emitter breakdown voltage	BV_{CEO}	–210	–	–	V	$I_C = -100\mu\text{A}$, $R_{BE} = 10k\Omega$
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	$I_E = -50\mu\text{A}$
Collector cutoff current	I_{CBO}	–	–	–	μA	$V_{CB} = -150V$
Emitter cutoff current	I_{EBO}	–	–	–1	μA	$V_{EB} = -4.5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	–1	V	$I_C/I_B = -2mA/-0.2mA$
DC current transfer ratio	h_{FE}	82	–	–1	–	$V_{CE} = -3V$, $I_C = -5A$
Transition frequency	f_T	–	50	270	MHz	$V_{CE} = -5V$, $I_E = 2mA$, $f = 30MHz$
Output capacitance	C_{ob}	–	8	–	pF	$V_{CE} = -10V$, $I_E = 0A$, $f = 1MHz$

●Packaging specifications and h_{FE}

Type	2SA821S
Package	SPT
h_{FE}	PQ
Code	TP
Basic ordering unit (pieces)	5000