

PNP Transistors

2SA1971

■ Features

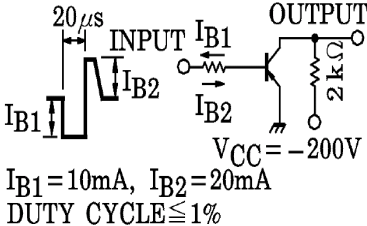
- Collector Current Capability $I_C = -0.5A$
- Collector Emitter Voltage $V_{CEO} = -400V$
- Marking: A*L

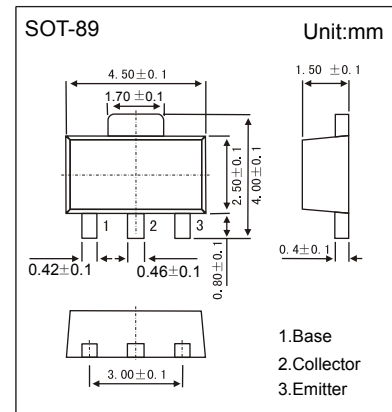
■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-400	V
Collector - Emitter Voltage	V_{CEO}	-400	
Emitter - Base Voltage	V_{EBO}	-7	
Collector Current - Continuous	I_C	-0.5	A
Collector Current - Pulse	I_{CP}	-1	
Base Current	I_B	-0.25	
Collector Power Dissipation (Note.1)	P_C	500	mW
		1	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature range	T_{stg}	-55 to 150	

Note.1: mounted on ceramic substrate (250mm²X0.8t)

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = -100 \mu A, I_E = 0$	-400			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -10 mA, I_B = 0$	-400			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -100 \mu A, I_C = 0$	-7			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -400 V, I_E = 0$			-10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -7V, I_C = 0$			-1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100 mA, I_B = -10mA$			-1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100 mA, I_B = -10mA$			-0.9	
DC current gain	h_{FE}	$V_{CE} = -5V, I_C = -20mA$	140		450	
		$V_{CE} = -5V, I_C = -100mA$	140		400	
Turn-on time	t_{on}	 20μs INPUT I_{B1} I_{B2} OUTPUT $V_{CC} = -200V$ $I_{B1} = 10mA, I_{B2} = 20mA$ DUTY CYCLE $\leq 1\%$		0.2		μs
Turn-off time	t_{off}			2.3		
Fall time	t_f			0.2		
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		18		pF
Transition frequency	f_T	$V_{CE} = -5V, I_C = -50mA$		35		MHz



PNP Transistors

2SA1971

■ Typical Characteristics

