



TO-92 Plastic-Encapsulate Transistors

2SA719/2SA720

TRANSISTOR (PNP)

FEATURES

For low-frequency power amplification
and driver amplification

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage 2SA719	-30	V
	2SA720	-60	
V_{CEO}	Collector-Emitter Voltage 2SA719	-25	V
	2SA720	-50	
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-500	mA
P_C	Collector Power Dissipation	625	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

TO-92

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 2SA719 2SA720	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-30 -60			V
Collector-emitter breakdown voltage 2SA719 2SA720	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-25 -50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -10\text{V}, I_C = -150\text{mA}$	85		340	
	$h_{FE(2)}$	$V_{CE} = -10\text{V}, I_C = -500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -300\text{mA}, I_B = -30\text{mA}$			-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -300\text{mA}, I_B = -30\text{mA}$			-1.5	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$ $f = 200\text{MHz}$		200		MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$			15	pF

CLASSIFICATION $h_{FE(1)}$

Rank	Q	R	S
Range	85-170	120-240	170-340

Typical Characteristics

2SA719, 2SA720



