

TO-92L Plastic-Encapsulate Transistors

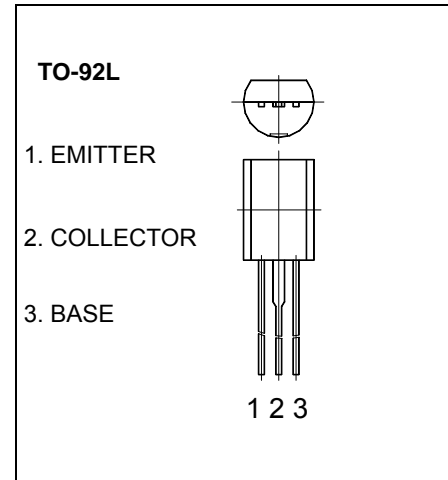
2SA1020 TRANSISTOR (PNP)

FEATURES

Power amplifier applications

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-50	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current –Continuous	-2	A
P _C	Collector Power Dissipation	900	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = -100μA, I _E = 0	-50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = -10mA, I _B = 0	-50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -100μA, I _C = 0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} = -50V, I _E = 0			-1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -5V, I _C = 0			-1	μA
DC current gain	h _{FE(1)}	V _{CE} = -2V, I _C = -0.5A	70		240	
	h _{FE(2)}	V _{CE} = -2V, I _C = -1.5A	40			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -1A, I _B = -50mA			-0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = -1A, I _B = -50mA			-1.2	V
Transition frequency	f _T	V _{CE} = -2V, I _C = -500mA		100		MHz
Collector output capacitance	C _{ob}	V _{CB} = -10V, I _E = 0, f = 1MHz		40		pF
Turn-on time	t _{on}	V _{CC} = -30V, I _{B1} = -I _{B2} = -0.05A, I _C = -1A		0.1		μs
Storage time	t _s			1		μs
Fall time	t _f			0.1		μs

CLASSIFICATION OF h_{FE(1)}

Rank	O	Y
Range	70-140	120-240

Typical Characteristics

2SA1020

