

TO-92 Plastic-Encapsulate Transistors

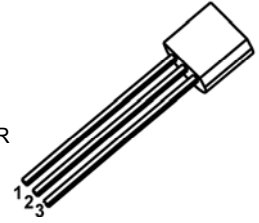
2SC2120 TRANSISTOR (NPN)

FEATURES

- High DC Current Gain
- Complementary to 2SA950

TO - 92

1. EMITTER
2. COLLECTOR
3. BASE



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	0.8	A
P_C	Collector Power Dissipation	600	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	208	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1\text{mA}, I_E=0$	35			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.1\text{mA}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=35\text{V}, I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=25\text{V}, I_B=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=1\text{V}, I_C=100\text{mA}$	100		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=20\text{mA}$			0.5	V
Base-emitter voltage	V_{BE}	$V_{CE}=1\text{V}, I_C=10\text{mA}$			0.8	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			13	pF
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}$	100			MHz

CLASSIFICATION OF h_{FE}

RANK	O	Y
RANGE	100-200	160-320

Typical Characteristics

2SC2120

