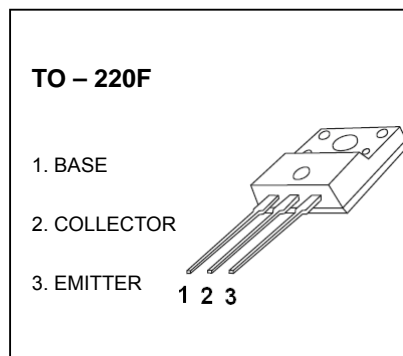


TO-220F Plastic-Encapsulate Transistors

2SA2050 TRANSISTOR (PNP)

FEATURES

- High Breakdown Voltage
- General Purpose Switching and Amplification



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-180	V
V_{CEO}	Collector-Emitter Voltage	-160	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-1.5	A
P_C	Collector Power Dissipation	1.5	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	83	$^{\circ}\text{C}/\text{W}$
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	$V_{(BR)CBO}$	$I_C=-1\text{mA}, I_E=0$	-180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}, I_B=0$	-160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB}=-180\text{V}, I_E=0$			-10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-6\text{V}, I_C=0$			-10	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-5\text{V}, I_C=-0.2\text{A}$	60		240	
	$h_{FE(2)}$	$V_{CE}=-5\text{V}, I_C=-1.5\text{A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE}=-10\text{V}, I_C=-0.05\text{A}$	50			MHz

CLASSIFICATION OF $h_{FE(1)}$

RANK	R	O
RANGE	60-140	100-240