2SC4003 TRANSISTOR (NPN)

1.BASE
2.COLLECTOR
3.EMITTER

TO-251

FEATURES

- High h_{FE}
- Low $V_{CE(sat)}$

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Power Dissipation	1	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55-150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test condi tions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA,I_E=0	400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=300V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=10V,I_C=50mA	60		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA,I_B=5mA			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=50mA,I_B=5mA			1	V
Transition frequency	f_T	V_{CE}=30V,I_C=10mA		70		MHz

CLASSIFICATION OF h_{FE}

Rank	D	E
Range	60-120	100-200