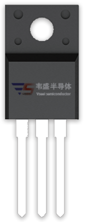
2SC5171 TRANSISTOR (NPN)



FEATURES

- High Transition Frequency
- Power Amplifier Applications

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	180	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	2	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	62.5	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	I_C=10mA,I_B=0	180			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=1mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=180V,I_E=0			5	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			5	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=0.1A	100		320	
	$h_{FE(2)}^*$	V_{CE}=5V, I_C=1A	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1A,I_B=100mA			1	V
Base-emitter voltage	V_{BE}	V_{CE}=5V, I_C=1A			1.5	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz		16		pF
Transition frequency	f_T	V_{CE}=5V,I_C=300mA		200		MHz

*Pulse test