2SD2137A TRANSISTOR (NPN)

TO-220C

1.BASE
2.COLLECTOR
3.EMITTER

FEATURES

- High DC Current Gain
- Low Collector to Emitter Saturation Voltage $V_{CE(sat)}$
- Allowing Automatic Insertion with Radial Taping

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	3	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	63	℃/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	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=30mA,I_B=0	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=80V,I_E=0			100	μA
Collector cut-off current	I_{CEO}	V_{CE}=60V,I_B=0			100	μA
Emitter cut-off current	I_{EBO}	V_{EB}=6V,I_C=0			100	μA
DC current gain	$h_{FE(1)}$	V_{CE}=4V, I_C=1A	70		320	
	$h_{FE(2)}$	V_{CE}=4V, I_C=3A	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=3A,I_B=0.375A			1.2	V
Base-emitter voltage	V_{BE}	V_{CE}=4V, I_C=3A			1.8	V
Transition frequency	f_T	V_{CE}=5V,I_C=0.2A, f=10MHz		30		MHz

CLASSIFICATION OF $h_{FE(1)}$

RANK	Q	P	O
RANGE	70-150	120-250	160-320