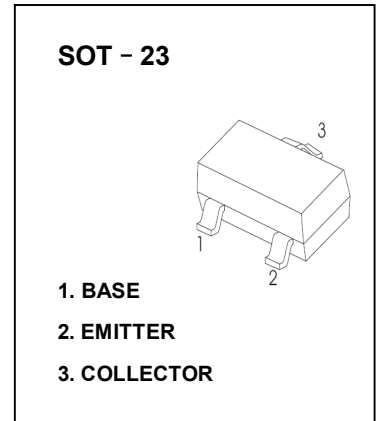


TRANSISTOR (NPN)

FEATURES

- High Collector Current
- High Current Gain

MARKING:FF



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	40	V
V _{CEO}	Collector-Emitter Voltage	30	V
V _{EBO}	Emitter-Base Voltage	10	V
I _C	Collector Current	500	mA
P _C	Collector Power Dissipation	300	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	416	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =10mA, I _B =0	30			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	10			V
Collector cut-off current	I _{CBO}	V _{CB} =30V, 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(1)}	V _{CE} =1V, I _C =100μA	4000			
	h _{FE(2)}	V _{CE} =5V, I _C =10mA	10000			
	h _{FE(3)}	V _{CE} =5V, I _C =100mA	20000			
	h _{FE(4)}	V _{CE} =5V, I _C =0.5A	4000			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100mA, I _B =0.1mA			1	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B =0.1mA			1.5	V
Transition frequency	f _T	V _{CE} =5V, I _C =50mA, f=100MHz		170		MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		3.5		pF