

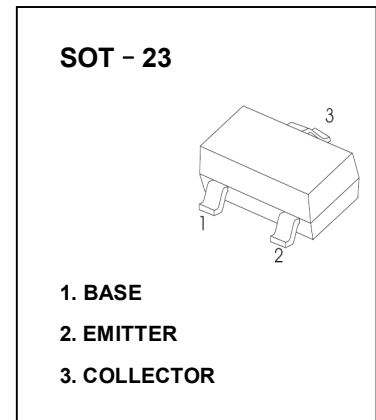
TRANSISTOR (NPN)

FEATURES

- Low Collector to Emitter Saturation Voltage
- Mini Type Package

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	50	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	500	mA
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°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 =10μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =10mA, I _B =0	50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	5			V
Collector cut-off current	I _{CB0}	V _{CB} =20V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	μA
DC current gain	h _{FE(1)} *	V _{CE} =10V, I _C =0.15A	85		340	
	h _{FE(2)} *	V _{CE} =10V, I _C =0.5A	40			
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =0.3A, I _B =0.03A			0.6	V
Transition frequency	f _T	V _{CE} =10V, I _C =0.05A, f=200MHz		200		MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz			15	pF

*Pulse test: pulse width ≤350μs, duty cycles ≤ 2.0%.

CLASSIFICATION OF h_{FE(1)}

RANK	XQ	XR	XS
RANGE	85 - 170	120 - 240	170 - 340
MARKING	WQ1	WR1	WS1