



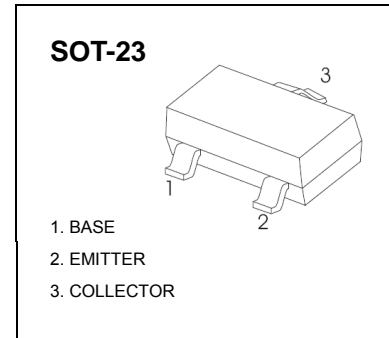
TRANSISTOR (NPN)

FEATURE

power switching applications

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector -Base Voltage	700	V
V_{CE0}	Collector-Emitter Voltage	400	V
V_{EB0}	Emitter-Base Voltage	9	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Power Dissipation	0.35	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CB0}$	$I_C = 1\text{mA}, I_E = 0$	700			V
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_C = 1\text{mA}, I_B = 0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EB0}$	$I_E = 100\mu\text{A}, I_C = 0$	9			V
Collector cut-off current	I_{CB0}	$V_{CB} = 600\text{V}, I_E = 0$			10	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 9\text{V}, I_C = 0$			10	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 10\text{V}, I_C = 20\text{mA}$	10		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 20\text{mA}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100\text{mA}, I_B = 20\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE} = 20\text{V}, I_C = 20\text{mA}$ $f = 1\text{MHz}$	5			MHz
Storage time	t_s	$I_C = 100\text{mA}$			3.5	μs

CLASSIFICATION OF $h_{FE(1)}$

Range	10-15	15-20	20-25	25-30	30-35	30-40				