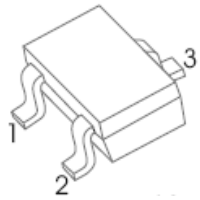
SOT-323 Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

FEATURES

- High $I_{CMax.}$ =0.5A
- Low $V_{CE(sat)}$.Optimal for low voltage operation.
- Complements the 2SA1577

SOT－323



1. BASE
2. EMITTER
3. COLLECTOR

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	32	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	200	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-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	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=20V, I_E=0			1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			1	uA
DC current gain	h_{FE}*	V_{CE}=3V, I_C=10mA	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=500mA, I_B=50mA			0.4	V
Transition frequency	f_T	V_{CE}=5V, I_C=20mA		250		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		6		pF

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

CLASSIFICATION OF h_{FE}

RANK	P	Q	R
RANGE	82－180	120－270	180－390
MARKING	CP	CQ	CR

Typical Characterisitics