

SOT-323 Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

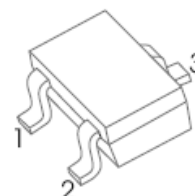
FEATURES

- High $I_{CMax.} = 0.5A$
- Low $V_{CE(sat)}$. Optimal for low voltage operation.
- Complements the 2SA1577W

MAXIMUM RATINGS ($T_a=25^{\circ}C$ 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	$^{\circ}C/W$
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}C$

SOT - 323



1. BASE
2. EMITTER
3. COLLECTOR

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			1	μA
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 $\leq 350\mu s$, duty cycle $\leq 2.0\%$.

CLASSIFICATION OF h_{FE}

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

Typical Characteristics

