2SD0602A TRANSISTOR (NPN)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-23-3

FEATURES

- Low Collector to Emitter Saturation Voltage
- Mini Type Package

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	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
$R_{\Theta JA}$	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=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_{CBO}	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 cycle≤ 2.0%.

CLASSIFICATION OF $h_{FE(1)}$

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