

GENERAL PURPOSE APPLICATION.  
HIGH VOLTAGE APPLICATION.

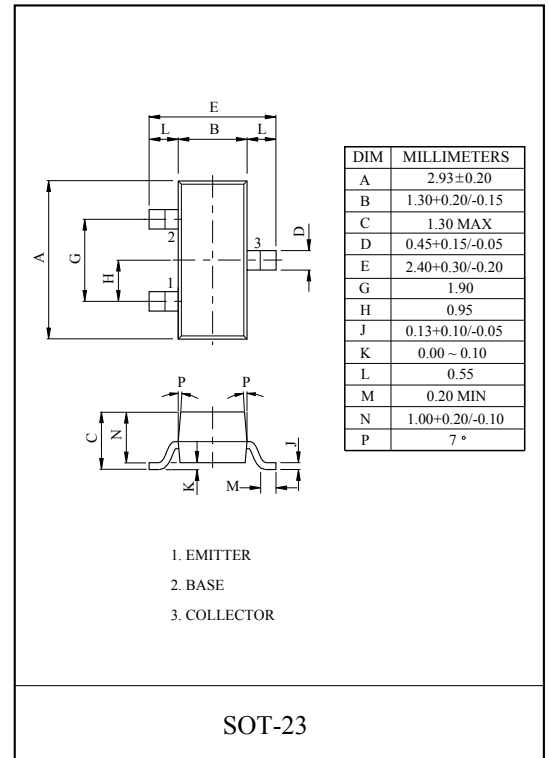
#### FEATURES

- High Collector Breakdwon Voltage  
:  $V_{CBO}=180V$ ,  $V_{CEO}=160V$
- Low Leakage Current.  
:  $I_{CBO}=50nA(Max.)$   $V_{CB}=120V$
- Low Saturation Voltage  
:  $V_{CE(sat)}=0.2V(Max.)$   $I_C=50mA$ ,  $I_B=5mA$
- Low Noise :  $NF=8dB (Max.)$

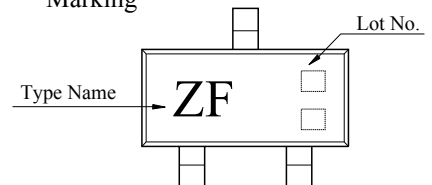
#### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	180	V
Collector-Emitter Voltage	$V_{CEO}$	160	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	600	mA
Base Current	$I_B$	100	mA
Collector Power Dissipation	$P_C^*$	350	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

Note : \* Package Mounted On 99.5% Alumina  $10 \times 8 \times 0.6mm$ )



#### Marking



# 2N5551S

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=120V, I_E=0$	-	-	50	nA
		$V_{CB}=120V, I_E=0, T_a=100^\circ C$	-	-	50	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=4V, I_C=0$	-	-	50	nA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	180	-	-	V
Collector-Emitter Breakdown Voltage *	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	160	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6	-	-	V
DC Current Gain *	$h_{FE}(1)$	$V_{CE}=5V, I_C=1mA$	80	-	-	
	$h_{FE}(2)$	$V_{CE}=5V, I_C=10mA$	80	-	250	
	$h_{FE}(3)$	$V_{CE}=5V, I_C=50mA$	30	-	-	
Collector-Emitter Saturation Voltage *	$V_{CE(sat)1}$	$I_C=10mA, I_B=1mA$	-	-	0.15	V
	$V_{CE(sat)2}$	$I_C=50mA, I_B=5mA$	-	-	0.2	
Base-Emitter Saturation Voltage *	$V_{BE(sat)1}$	$I_C=10mA, I_B=1mA$	-	-	1.0	V
	$V_{BE(sat)2}$	$I_C=50mA, I_B=5mA$	-	-	1.0	
Transition Frequency	$f_T$	$V_{CE}=10V, I_C=10mA, f=100MHz$	100	-	300	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	-	6	pF
Input Capacitance	$C_{ib}$	$V_{BE}=0.5V, I_C=0, f=1MHz$	-	-	20	pF
Small-Signal Current Gain	$h_{fe}$	$V_{CE}=10V, I_C=1mA, f=1kHz$	50	-	200	
Noise Figure	NF	$V_{CE}=5V, I_C=250\mu A$ $R_g=1k\Omega, f=10Hz \sim 15.7kHz$	-	-	8	dB

\* Pulse Test : Pulse Width  $\leq 300\mu S$ , Duty Cycle  $\leq 2\%$ .