

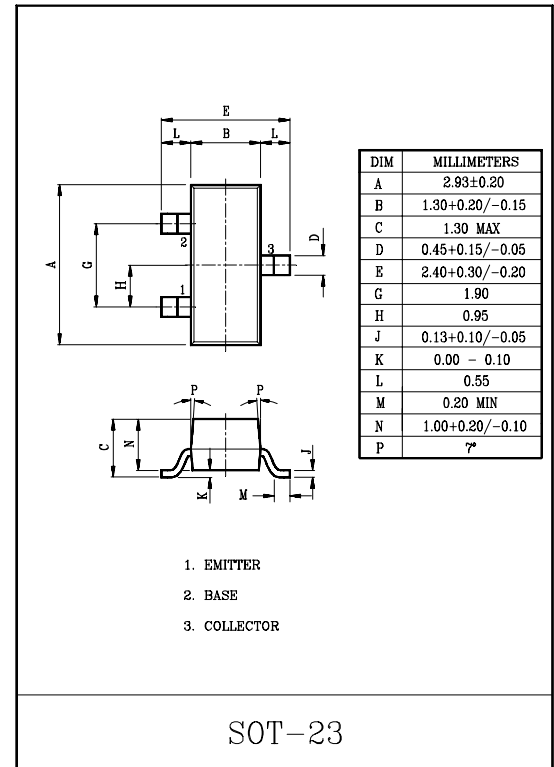
GENERAL PURPOSE APPLICATION.  
HIGH VOLTAGE APPLICATION.

#### FEATURES

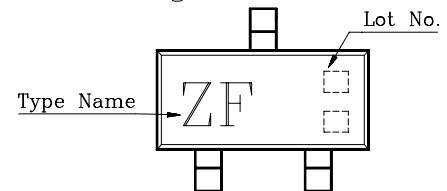
- High Collector Breakdown Voltage  
:  $V_{CBO}=180V$ ,  $V_{CEO}=160V$
- Low Leakage Current.  
:  $I_{CBO}=50nA(\text{Max.})$   $V_{CB}=120V$
- Low Saturation Voltage  
:  $V_{CE(\text{sat})}=0.2V(\text{Max.})$   $I_C=50mA$ ,  $I_B=5mA$
- Low Noise :  $NF=8dB$  (Max.)

#### MAXIMUM RATINGS ( $T_a=25^\circ C$ )

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	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



#### Marking



# 2N5551S

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> =120V, I <sub>E</sub> =0	-	-	50	nA
		V <sub>CB</sub> =120V, I <sub>E</sub> =0, Ta=100°C	-	-	50	μA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0	-	-	50	nA
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =0.1mA, I <sub>E</sub> =0	180	-	-	V
Collector-Emitter Breakdown Voltage *	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	160	-	-	V
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	6	-	-	V
DC Current Gain *	h <sub>FE</sub> (1)	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	80	-	-	
	h <sub>FE</sub> (2)	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	80	-	250	
	h <sub>FE</sub> (3)	V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	30	-	-	
Collector-Emitter Saturation Voltage *	V <sub>CE(sat)1</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA	-	-	0.15	V
	V <sub>CE(sat)2</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA	-	-	0.2	
Base-Emitter Saturation Voltage *	V <sub>BE(sat)1</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA	-	-	1.0	V
	V <sub>BE(sat)2</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =5mA	-	-	1.0	
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz	100	-	300	MHz
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz	-	-	6	pF
Input Capacitance	C <sub>ib</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1MHz	-	-	20	pF
Small-Signal Current Gain	h <sub>fe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA, f=1kHz	50	-	200	
Noise Figure	NF	V <sub>CE</sub> =5V, I <sub>C</sub> =250μA R <sub>g</sub> =1kΩ, f=10Hz~15.7kHz	-	-	8	dB

\*Pulse Test : Pulse Width ≤300μS, Duty Cycle≤2%