

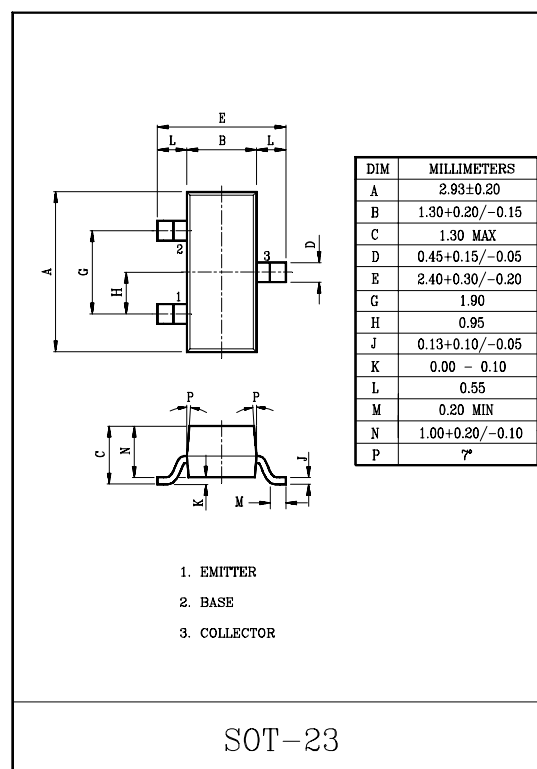
GENERAL PURPOSE APPLICATION.
HIGH VOLTAGE APPLICATION.

FEATURES

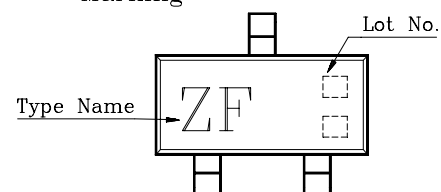
- High Collector Breakdown Voltage
: V_{CEO} -180V, V_{CEC} -160V
- Low Leakage Current
: I_{CEO} -50nA(Max.) V_{CE} -120V
- Low Saturation Voltage
: $V_{CE(sat)}$ -0.2V(Max.) I_C -50mA, I_B -5mA
- Low Noise : NF-8dB (Max.)

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector Base Voltage	V_{CB0}	180	V
Collector Emitter Voltage	V_{CE0}	160	V
Emitter Base Voltage	V_{EB0}	6	V
Collector Current	I_C	600	mA
Base Current	I_B	100	mA
Collector Power Dissipation	P_C	370	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^{\circ}\text{C}$



Marking



2N5551S

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CE}=120V, I_B=0$			50	nA
		$V_{CE}=120V, I_B=0, T_a=100^\circ C$			50	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=4V, I_C=0$			50	nA
Collector-Base Breakdown Voltage	$V_{CBR(BR)}$	$I_C=0.1mA, I_E=0$	180	-	-	V
Collector-Emitter Breakdown Voltage *	$V_{CE(BR)}$	$I_C=1mA, I_B=0$	100	-	-	V
Emitter-Base Breakdown Voltage	$V_{EB(BR)}$	$I_E=10\mu A, I_C=0$	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_{CO}	$V_{CE}=10V, I_B=0, f=1MHz$			6	pF
Input Capacitance	C_i	$V_{BE}=0.5V, I_C=0, f=1MHz$			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 $\leq 2\%$