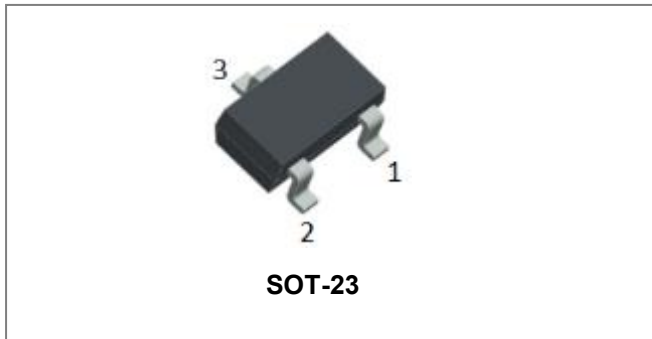


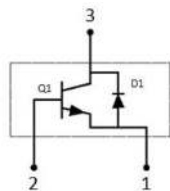
SSTX404S NPN General Purpose Amplifier



Features

- **Low saturation Voltage(Transistor)**
: $V_{CE(sat)}=0.3V(\text{Max.})$; $I_C=150mA, I_B=15mA$
Fast Reverse Recovery Time(Diode)
- **Capable of 350mWatts of Power Dissipation**
- **Operating and Storage Junction Temperatures: -55°C to 150°C**
- **Surface Mount SOT-23 Package**
- **RoHS compliant / Green EMC**
- **Collector current: $I_C=0.6A$**

Schematic & Pin Configuration



1. EMITTER/ANODE
2. BASE
3. COLLECTOR/CATHODE

Mechanical Characteristics

- **Case: SOT-23, Molded Plastic**
- **Terminals: Plated leads Solderable per MIL-STD-202, Method 208**
- **Mounting Position: Any**

Maximum Ratings@ $T_A=25^\circ\text{C}$ unless otherwise specified

TRANSISTOR(Q1)

Characteristic	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	75	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	0.6	A

DIODE(D1)

Characteristic	Symbol	Limits	Unit
Maximum (peak) Forward Current	I_{FM}	300	mA
Average Forward Current	I_O	100	mA
Surge Current (100uS)	I_{FSM}	2	A

COMMON

Characteristic	Symbol	Limits	Unit
Maximum Output (Pin1-Pin3)Voltage	V_O	40	V
Power Dissipation	P_C	350	mW
Junction Temperature Range	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified
TRANSISTOR(Q1)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=10\mu\text{A}, I_E=0$	60			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector cutoff current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$			10	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$			10	nA
DC current gain	h_{FE}	$h_{FE(1)} I_C=0.1\text{mA}, V_{CE}=10\text{V}^*$	35			
		$h_{FE(2)} I_C=1\text{mA}, V_{CE}=10\text{V}^*$	50			
		$h_{FE(3)} I_C=10\text{mA}, V_{CE}=10\text{V}^*$	75			
		$h_{FE(4)} I_C=150\text{mA}, V_{CE}=10\text{V}^*$	100		300	
		$h_{FE(5)} I_C=500\text{mA}, V_{CE}=10\text{V}^*$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}^*$ $I_C=500\text{mA}, I_B=50\text{mA}^*$			0.3 1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}^*$ $I_C=500\text{mA}, I_B=50\text{mA}^*$	0.6		1.2 2.0	V
Input Capacitance	C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHZ}$		15		pF

* Measured under pulsed conditions, Pulse width < 300 μs , duty cycle < 2%

DIODE(D1)

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Forward Voltage Drop	V_{F1}	$I_F=1\text{mA}$		0.61		V
		$I_F=10\text{mA}$		0.74		
		$I_F=100\text{mA}$		0.92	1.2	

COMMON

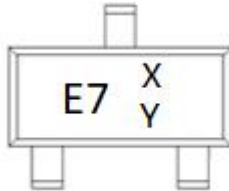
Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Output Voltage	V_O	$I_O=1\text{mA}, I_B=0$	40			V
Output Leakage Current	$I_{o(off)}$	$V_O=40\text{V}, V_{EB}=3\text{V}$			0.5	μA
Output Capacitance	C_{Ob}	$V_R=10\text{V}, I_E=0, f=1\text{MHZ}$		6.5		pF

Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch
SSTX404S	SOT-23	3000 pcs / reel	8mm	4mm

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

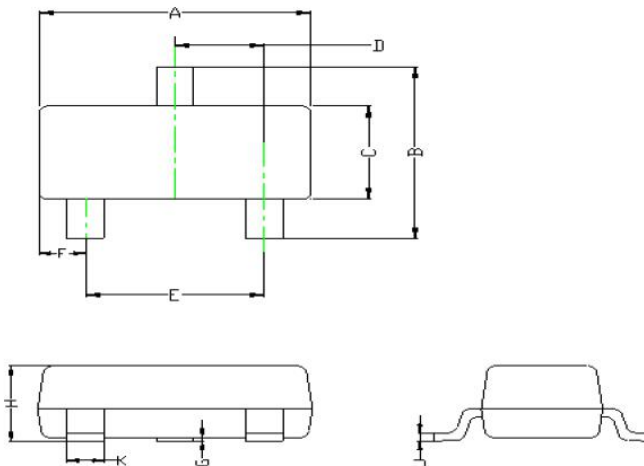


Where XY is date code

E7 = Marking code.
X = Month code
Y = Lot code

X	A	B	C	D	E	F	G	H	J	K	L	M
Month code	January	February	March	April	May	June	July	August	September	October	November	December
Y Lot code	0	1	2	3	4	5	6	7	8	9	-	-

Mechanical Dimensions SOT-23



SYMBOL	Millimeters	
	MIN.	MAX.
A	2.800	3.040
B	2.100	2.640
C	1.200	1.400
D	0.890	1.030
E	1.780	2.050
F	0.450	0.600
G	0.013	0.100
H	0.900	1.110
J	0.090	0.180
K	0.370	0.510

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