

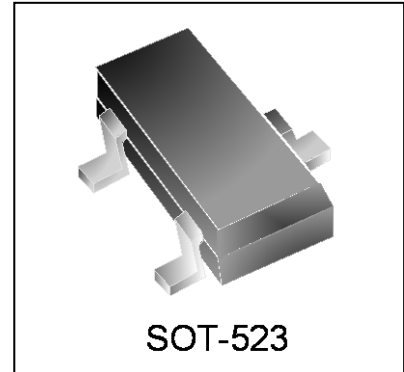
NPN Silicon Transistor

Features

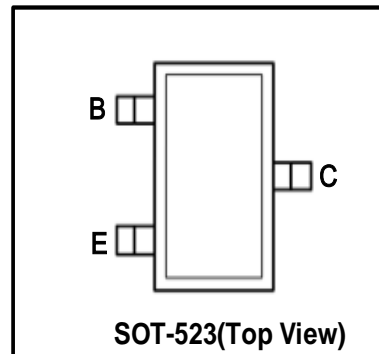
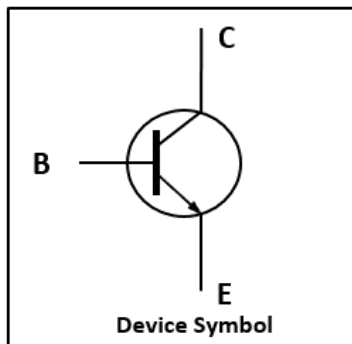
- Audio Frequency General Purpose Amplifier Applications
- Complementary to WT2907AT

Mechanical Characteristics

- SOT-523 Package
- Marking : Making Code
- RoHS Compliant



Schematic & PIN Configuration



Absolute Maximum Rating ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	75	V
Collector Emitter Voltage	V_{CEO}	40	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 ~ 150	$^{\circ}\text{C}$

Electrical Characteristics ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	75	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	40	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	6	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = 60\text{V}, I_E = 0$	-	-	100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3\text{V}, I_C = 0$	-	-	100	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = 10\text{V}, I_C = 0.1\text{mA}$	35	-	-	-
	$h_{FE(2)}$	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	50	-	-	-
	$h_{FE(3)}$	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	75	-	-	-
	$h_{FE(4)}$	$V_{CE} = 1\text{V}, I_C = 150\text{mA}$	50	-	-	-
	$h_{FE(5)}$	$V_{CE} = 10\text{V}, I_C = 150\text{mA}$	100	-	-	-
	$h_{FE(6)}$	$V_{CE} = 10\text{V}, I_C = 500\text{mA}$	40	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	-	-	1	V
		$I_C = 150\text{mA}, I_B = 15\text{mA}$	-	-	0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$	-	-	2.0	V
		$I_C = 150\text{mA}, I_B = 15\text{mA}$	-	-	1.2	V
Transition frequency	f_T	$V_{CE}=20\text{V}, -I_E=20\text{mA}, f=100\text{MHz}$	300	-	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, f = 100\text{KHz}$	-	-	8	pF
Delay time	t_d	$V_{CC} = 30\text{V}, V_{BE(off)} = 0.5\text{V}, I_C = 150\text{mA}, I_{B1} = 15\text{mA}$	-	-	10	ns
Rise time	t_r		-	-	25	ns
Storage time	t_s	$V_{CC} = 30\text{V}, I_C = 150\text{mA}, I_{B1} = -I_{B2} = 15\text{mA}$	-	-	225	ns
Fall time	t_f		-	-	60	ns

Outline Drawing – SOT-523

PACKAGE OUTLINE

SOT-523

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 BSC		0.020 BSC	
e1	0.900	1.100	0.035	0.043
L	0.300	0.500	0.012	0.020
L1	0.260	0.460	0.010	0.018
theta	0	8°	0	8°

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	.055	1.40
P	.039	1.00
P1	.020	0.50
G	.024	0.60
X	.016	0.40
Y	.031	0.80
Z	.087	2.20

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.

Marking Codes

Rank	WT2222AT
Marking Code	1P

Package Information

Qty: 3k/Reel

CONTACT INFORMATION

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For additional information, please contact your local Sales Representative.

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Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.