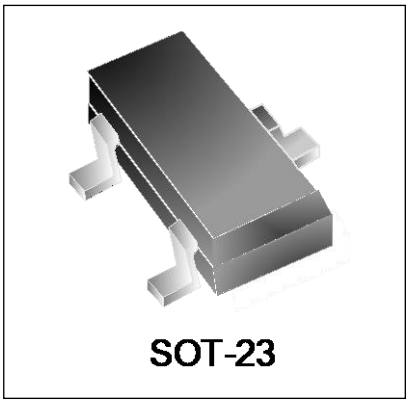
WT4401-AT

NPN Silicon Transistor

Features

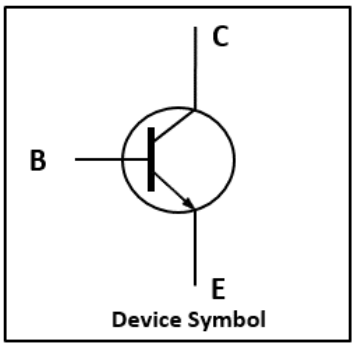
- Switching Transistor
- Ideal for Medium Power Amplification and Switching
- AEC-Q101 Qualified

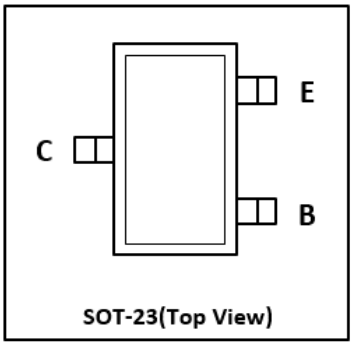


Mechanical Characteristics

- SOT-23 Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration





Absolute Maximum Rating (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	40	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	°C/W

©2019 WAYON Corporation

Electrical Characteristics (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 100μA, I_E = 0	60	-	-	V
Collector-emitter breakdown voltage[1]	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	40	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 100μA, I_C = 0	6	-	-	V
Collector cut-off current	I_{CBO}	V_{CB} = 50V, I_E = 0	-	-	100	nA
Collector cut off current	I_{CEX}	V_{CE} = 35V, V_{EB} = 0.4V	-	-	100	nA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V, I_C = 0	-	-	100	nA
DC current gain	$h_{FE(1)}$	V_{CE} = 2V, I_C = 500mA	40	-	-	-
	$h_{FE(2)}$	V_{CE} = 1V, I_C = 0.1mA	20	-	-	-
	$h_{FE(3)}$	V_{CE} = 1V, I_C = 1mA	40	-	-	-
	$h_{FE(4)}$	V_{CE} = 1V, I_C = 10mA	80	-	-	-
	$h_{FE(5)}$	V_{CE} = 1V, I_C = 150mA	100	-	300	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 150mA, I_B = 15mA	-	-	0.4	V
		I_C = 500mA, I_B = 50mA	-	-	0.75	V
Base-emitter saturation voltage[1]	$V_{BE(sat)}$	I_C = 150mA, I_B = 15mA	-	-	0.95	V
		I_C = 500mA, I_B = 50mA	-	-	1.2	V
Transition frequency	f_T	V_{CE}=10V,I_C=20mA, f=100MHz	250	-	-	MHz
Delay time	t_d	V_{CC} = 30V, $V_{BE(off)}$ = -2V, I_C = 150mA, I_{B1} = 15mA	-	-	15	ns
Rise time	t_r				20	ns
Storage time	t_s	V_{CC} = 30V, I_C = 150mA I_{B1} = I_{B2} = 15mA			225	ns
Fall time	t_f				60	ns

Typical Characteristics

Figure 1.Static Characteristics

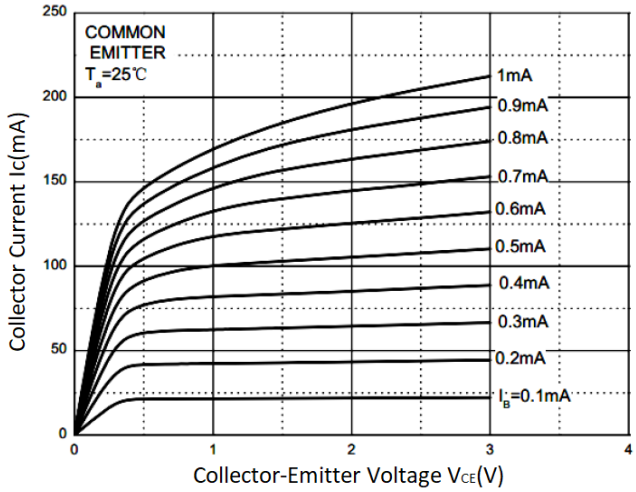


Figure 2. **h_{FE}** vs. **Ic**

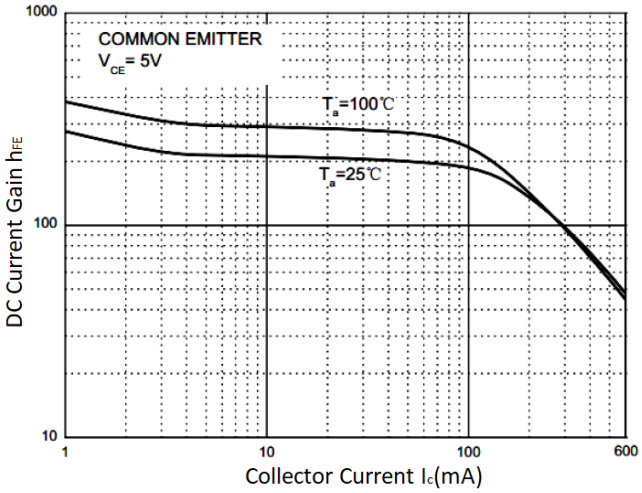


Figure 3. **$V_{BE(sat)}$** vs. **Ic**

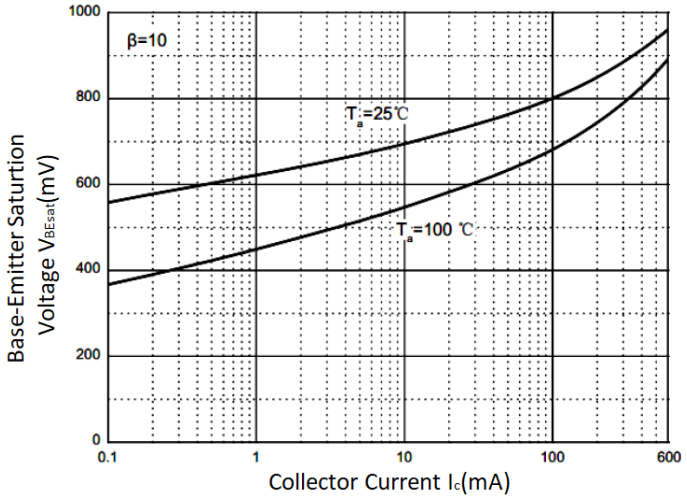


Figure 4. **$V_{CE(sat)}$** vs. **Ic**

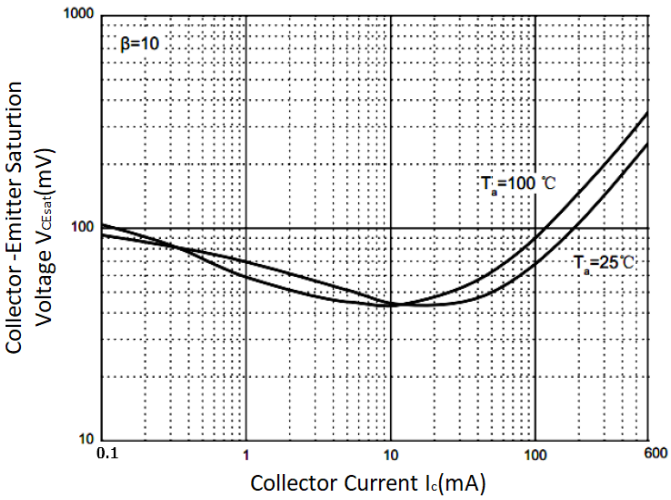


Figure 5. **Ic** VS. **V_{BE}**

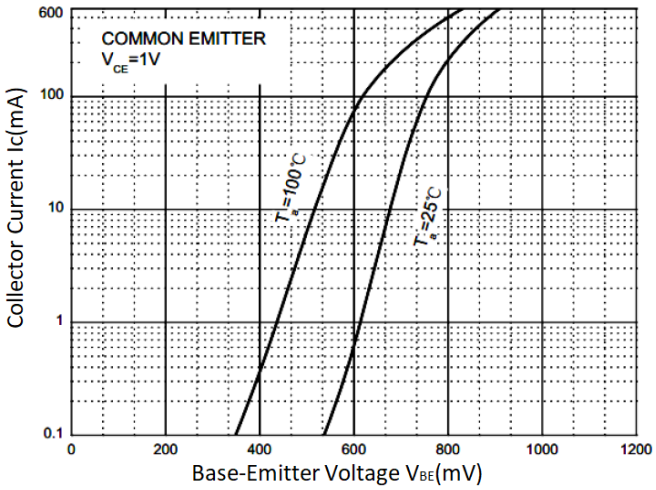


Figure 6. **C_{ob} / C_{ib}** vs. **V_{CB} / V_{EB}**

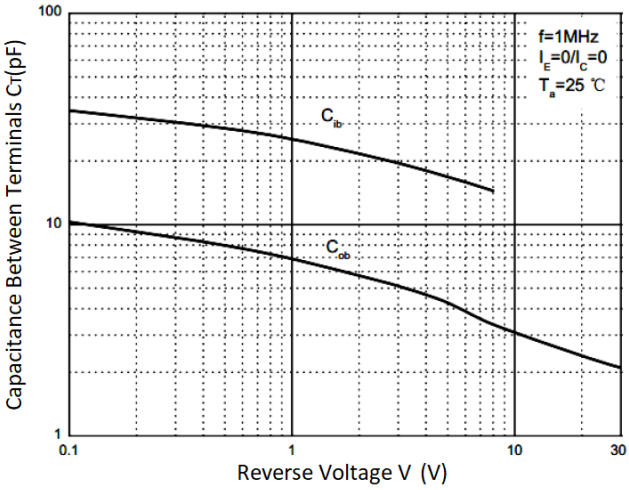


Figure 7. f_T vs. **Ic**

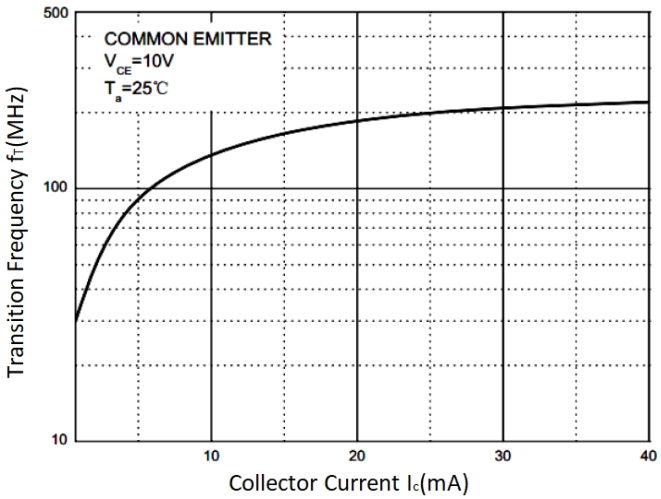
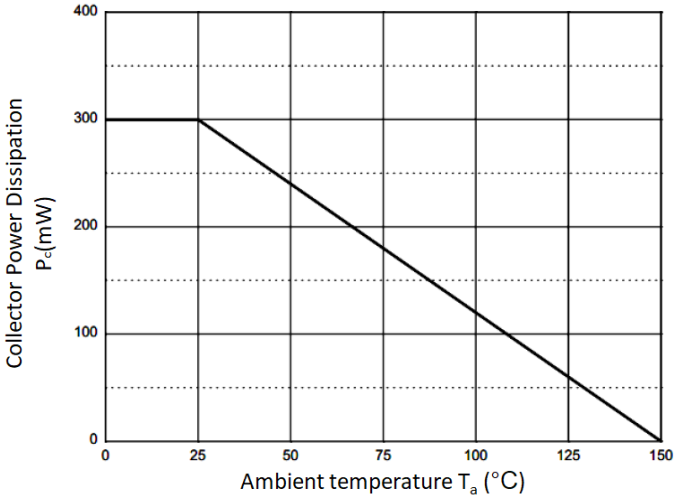
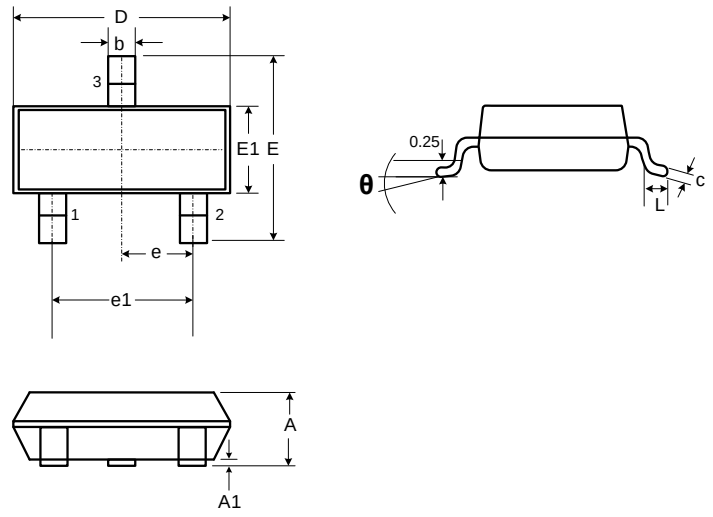


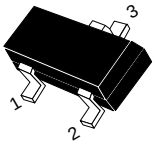
Figure 8. P_C vs. T_a



Outline Drawing – SOT-23

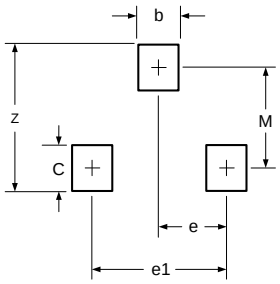
PACKAGE OUTLINE





SOT-23

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	2.25	2.55	0.089	0.100
E1	1.20	1.40	0.047	0.055
e	0.95 BSC		0.0374 BSC	
e1	1.80	2.00	0.071	0.079
L	0.30	0.50	0.012	0.020
θ	0	8°	0	8°



DIMENSIONS		
DIM	INCHES	MILLIMETERS
M	0.0795	2.02
C	0.0315	0.80
Z	0.111	2.82
e	0.037 BSC	0.95 BSC
e1	0.075 BSC	1.9 BSC
b	0.0315	0.80

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

Part Number	WT4401-AT
Marking Code	2X

Package Information

Qty：3k/Reel

CONTACT INFORMATION

No.1001, Shiwan (7) Road, Pudong District, Shanghai, P.R.China.201207
Tel: 86-21-68969993 Fax: 86-21-50757680 Email: market@way-on.com
WAYON website: **http://www.way-on.com**
For additional information, please contact your local Sales Representative.

WAYON ® is registered trademark of Wayon Corporation.

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.