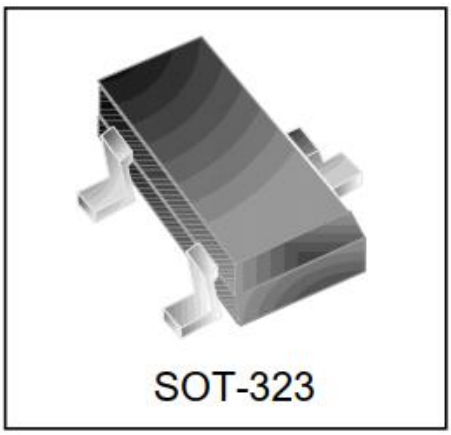
WT3904G

NPN Transistor

Features

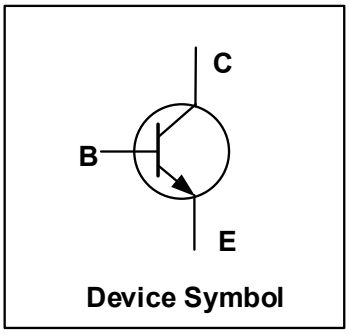
- Complementary to WT3906G
- Epitaxial Planar Die Construction
- Ideal for Low Power Amplification and Switching



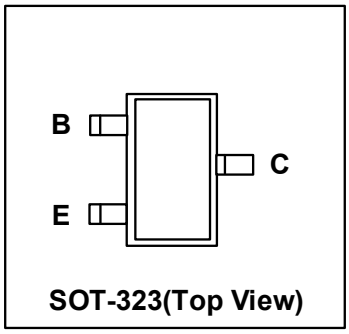
Mechanical Characteristics

- SOT-323 Package
- Marking : Making Code
- RoHS Compliant & HF
- Device meets MSL3 requirement

Schematic & PIN Configuration



Device Symbol



SOT-323(Top View)

Absolute Maximum Rating

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 Continuous	I_C	0.2	A
Collector Power Dissipation	P_C	0.2	W
Junction Temperature	T_J	-55 ~ 150	°C
Storage Temperature	T_{STG}	-55 ~ 150	°C

©2020 WAYON Corporation

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 10μA, I_E = 0	60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	40	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	6	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = 60V, I_E = 0	-	-	50	nA
Collector Cut-off Current	I_{CEX}	V_{CE} = 30V, $V_{EB(off)}$ = 3V	-	-	50	nA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	-	-	50	nA
DC Current Gain	$h_{FE(1)}$	V_{CE} = 1V, I_C = 0.1mA	40	-	-	
	$h_{FE(2)}$	V_{CE} = 1V, I_C = 1mA	70	-	-	
	$h_{FE(3)}$	V_{CE} = 1V, I_C = 10mA	100	-	300	
	$h_{FE(4)}$	V_{CE} = 1V, I_C = 50mA	60	-	-	
	$h_{FE(5)}$	V_{CE} = 1V, I_C = 100mA	30	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA	-	-	0.25	V
		I_C = 50mA, I_B = 5mA	-	-	0.3	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 10mA, I_B = 1mA	-	-	0.85	V
		I_C = 50mA, I_B = 5mA	-	-	0.95	
Transition Frequency	f_T	V_{CE}=20V, I_C=10mA, f=100MHz	300	-	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 5V, I_E = 0, f=1MHz	-	3	-	pF
Collector Input Capacitance	C_{ib}	V_{EB} = 0.5V, I_C = 0, f=1MHz	-	7	-	pF
Delay Time	t_d	V_{CC} = 3V, $V_{BE(off)}$ = -0.5V, I_C = 10mA, I_{B1}=1mA	-	31	-	ns
Rise Time	t_r		-	31	-	ns
Storage Time	t_s	V_{CC} = 3V, I_C = 10mA, I_{B1} =I_{B2} =1mA	-	180	-	ns
Fall Time	t_f		-	45	-	ns

Typical Characteristics

Figure 1.Static Characteristic

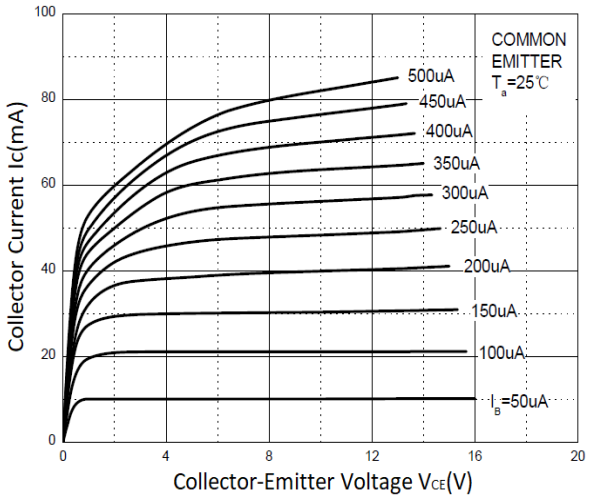


Figure 2. h_{fe} vs. I_C

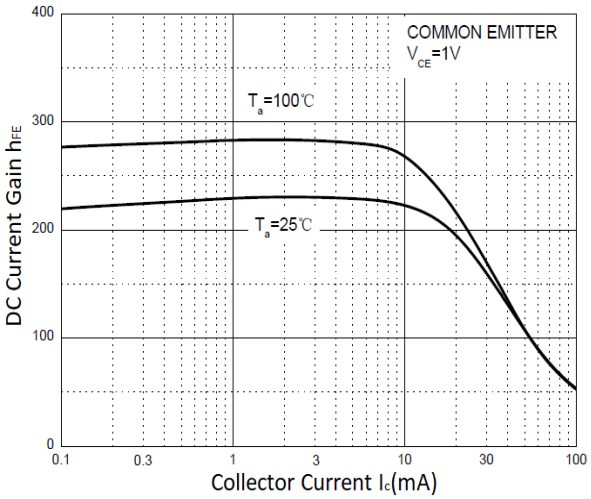


Figure 3. V_{CEsat} vs. I_C

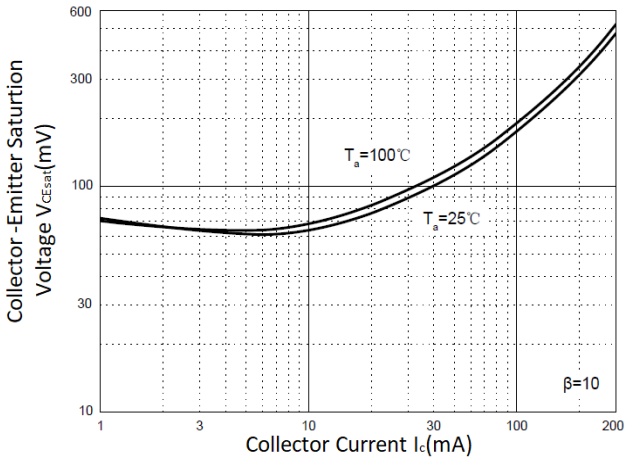


Figure 4. V_{BEsat} vs. I_C

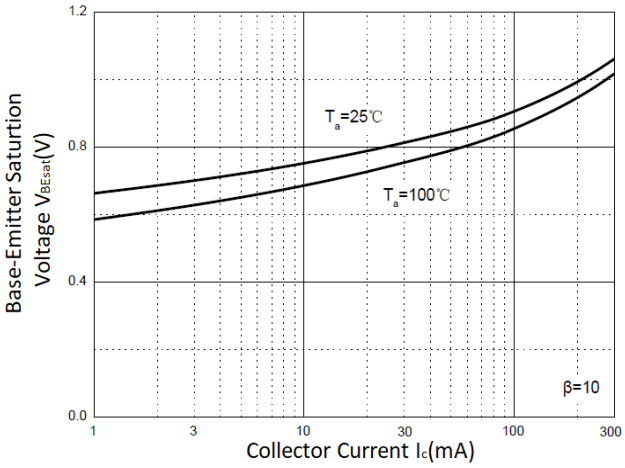


Figure 5. I_C vs. V_{BE}

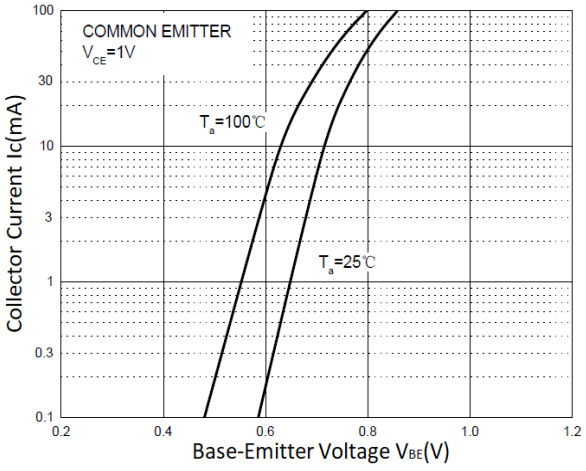
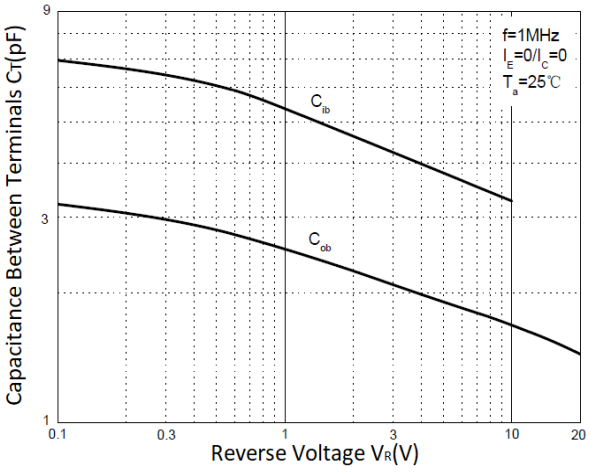
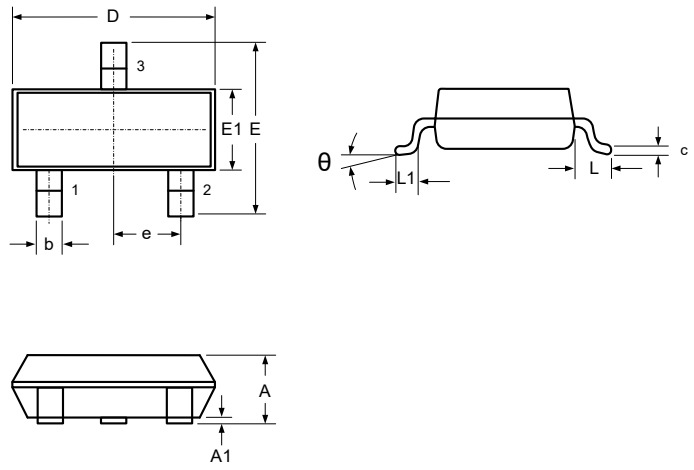


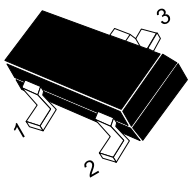
Figure 6. C_{ob} / C_{ib} vs. V_{CB} / V_{EB}



Outline Drawing – SOT-323

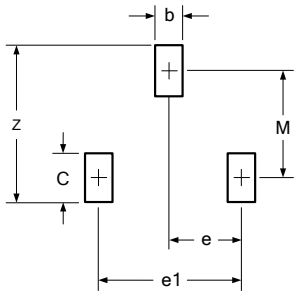
PACKAGE OUTLINE





SOT-323

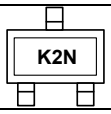
SYMBOL	MILLIMETERS	
	MIN	MAX
A	0.90	1.10
A1	0.00	0.10
b	0.20	0.40
c	0.08	0.15
D	2.00	2.20
E	2.15	2.45
E1	1.15	1.35
e	0.65 TYP	
L	0.525 REF	
L1	0.26	0.46
θ	0°	8°



DIMENSIONS		
DIM	INCHES	MILLIMETERS
M	0.076	1.90
C	0.036	0.90
Z	0.108	2.70
e	0.026	0.65
e1	0.052	1.30
b	0.028	0.70

Notes:
Controlling Dimension: Millimeter.

Marking Codes

Part Number	WT3904G
Marking Code	

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.