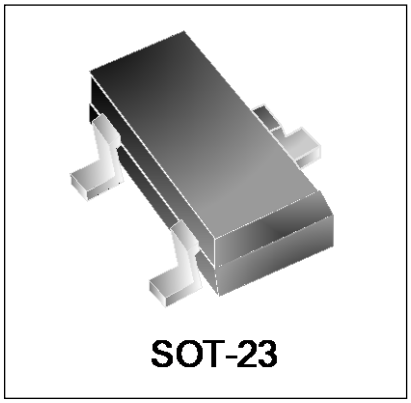
WT5551

NPN Silicon Transistor

Features

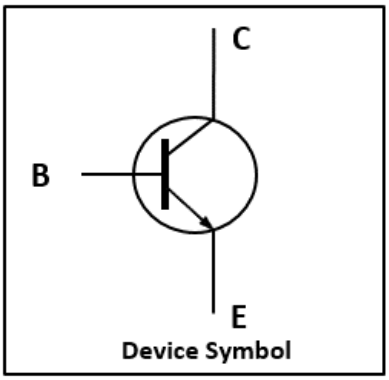
- Complementary to WT5401
- Ideal for Medium Power Amplification and Switching

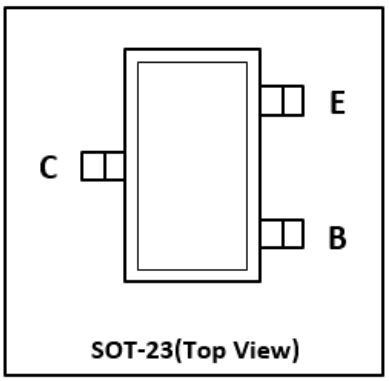


Mechanical Characteristics

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

Schematic & PIN Configuration





Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	180	V
Collector Emitter Voltage	V_{CEO}	160	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	$R_{\theta JA}$	416	°C/W

Electrical Characteristics (Tamb=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 100μA, I_E = 0	180	-	-	V
Collector-Emitter Breakdown Voltage[1]	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	160	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	6	-	-	V
Collector Cut-Off Current	I_{CBO}	V_{CB} = 120V, I_E = 0	-	-	50	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB} = 4V, I_C = 0	-	-	50	nA
DC Current Gain[1]	$h_{FE(1)}$	V_{CE} = 5V, I_C = 1mA	100	-	300	-
	$h_{FE(2)}$	V_{CE} = 5V, I_C = 10mA	100	-	-	-
	$h_{FE(3)}$	V_{CE} = 5V, I_C = 50mA	50	-	-	-
Collector-Emitter Saturation Voltage[1]	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA	-	-	0.15	V
		I_C = 50mA, I_B = 5mA	-	-	0.2	V
Base-Emitter Saturation Voltage[1]	$V_{BE(sat)}$	I_C = 10mA, I_B = 1mA	-	-	1	V
		I_C = 50mA, I_B = 5mA	-	-	1	V
Transition Frequency	f_T	V_{CE}=10V,I_C=10mA, f=100MHz	100	-	300	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	-	-	6	pF

Note:Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%

Classification OF $h_{FE(1)}$

Rank	L	H
Range	100-200	200-300

Typical Characteristics

Figure 1.Static Characteristics

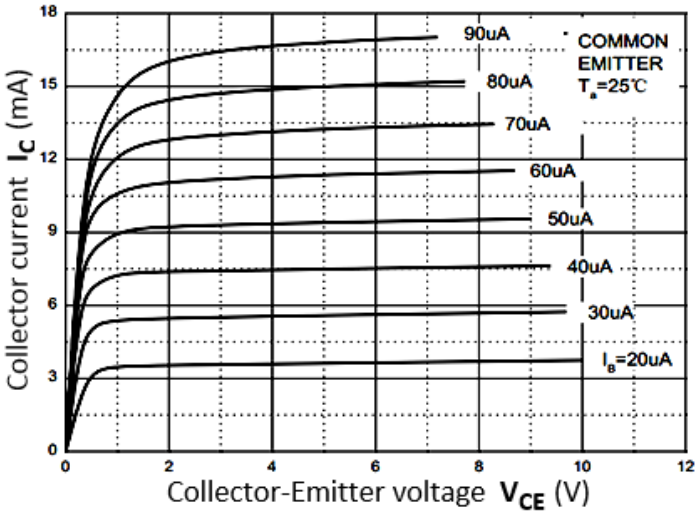


Figure 2. h_{FE} vs. I_C

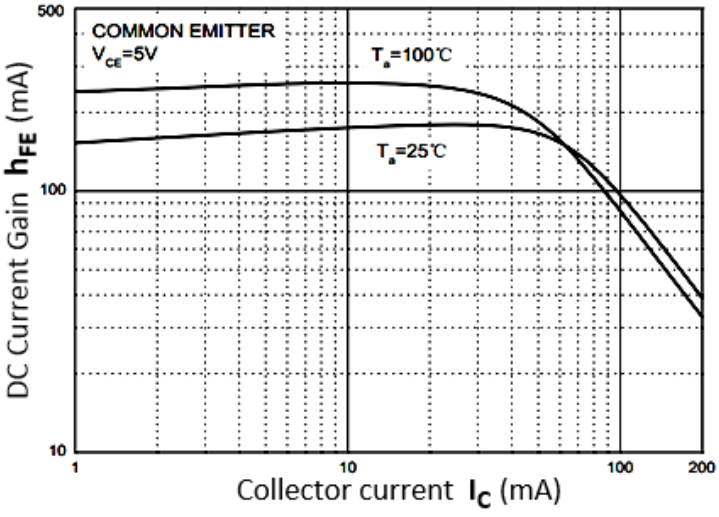


Figure 3. $V_{BE(sat)}$ vs. I_C

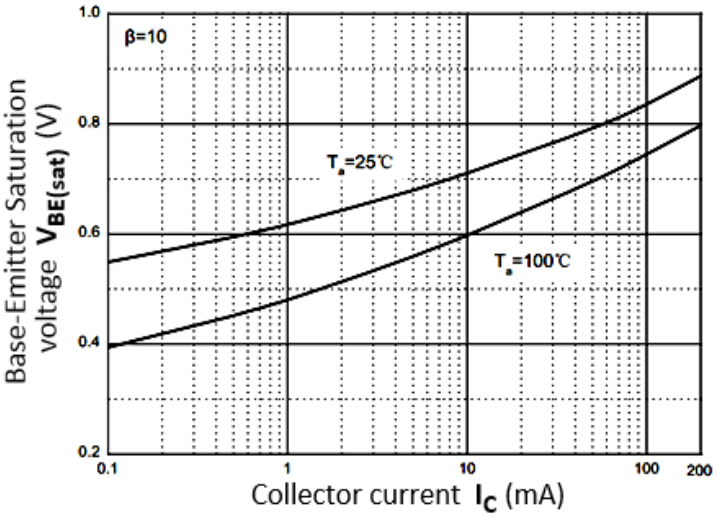


Figure 4. $V_{CE(sat)}$ vs. I_C

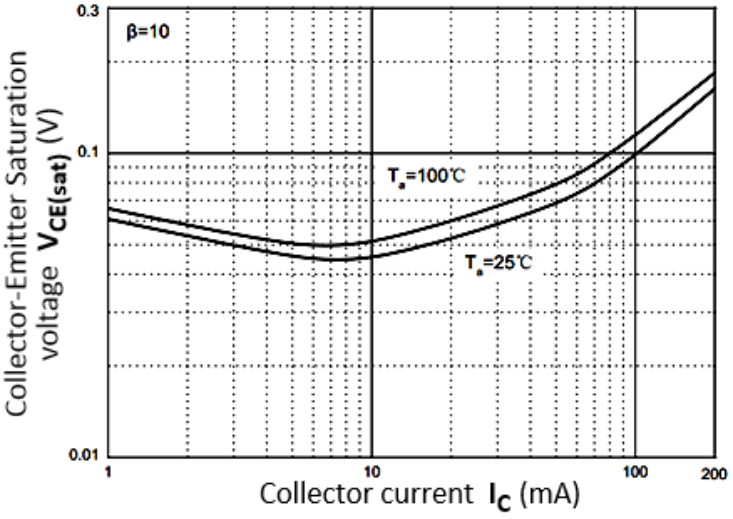


Figure 5. I_C vs. V_{BE}

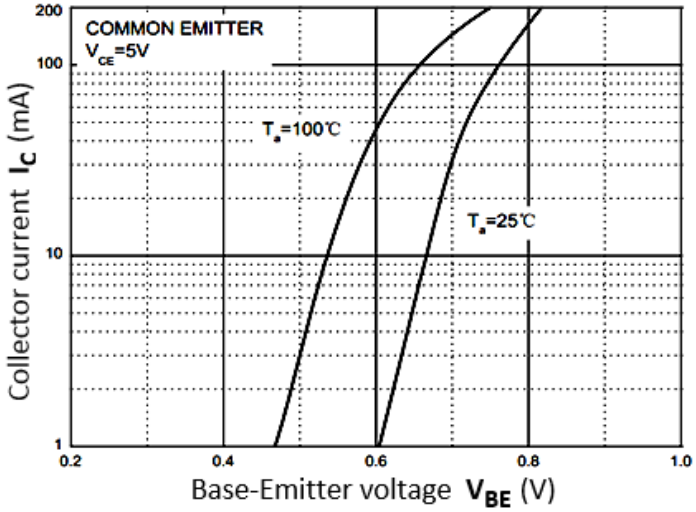


Figure 6. C_{ob} / C_{ib} vs. V_{CB} / V_{EB}

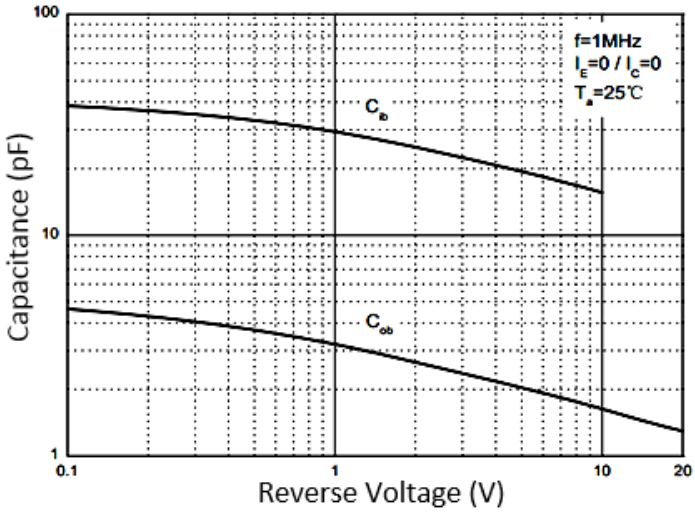


Figure 7. f_T vs. I_C

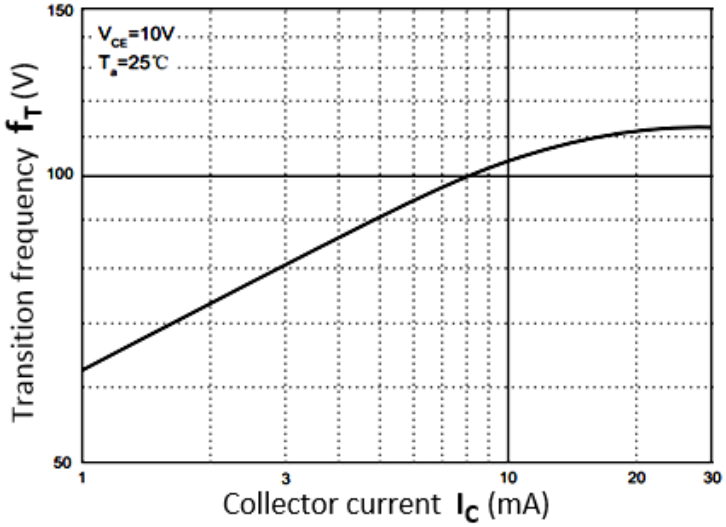
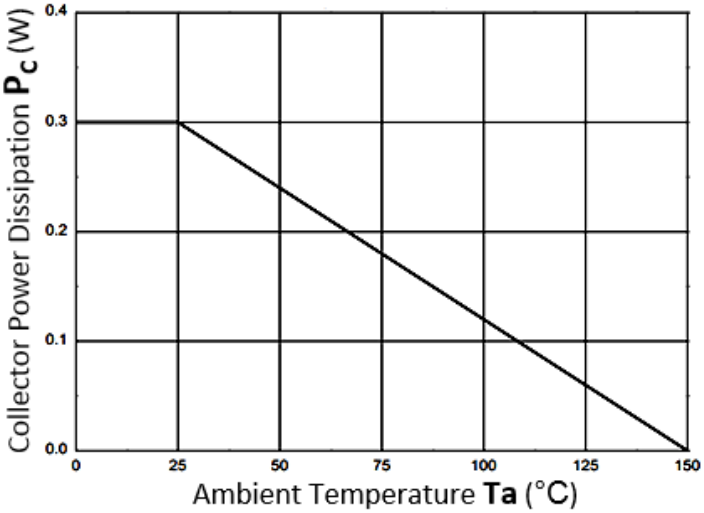
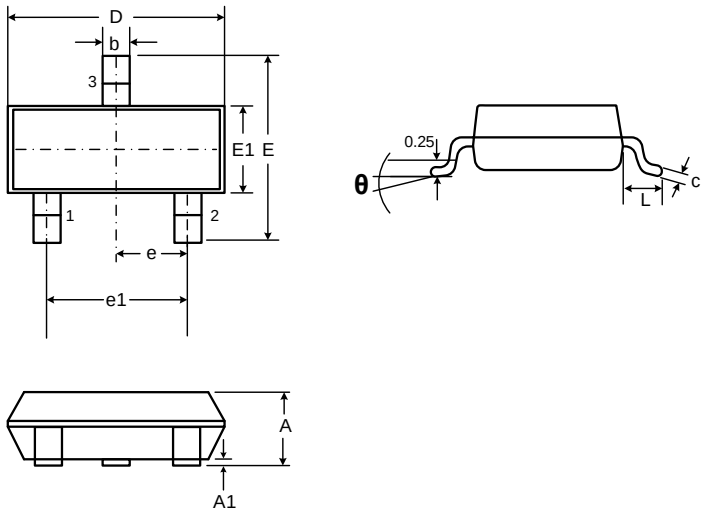


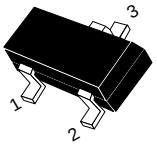
Figure 8. P_C vs. T_a



Outline Drawing – SOT-23

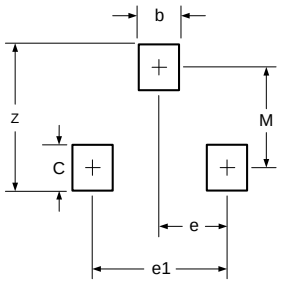
PACKAGE OUTLINE





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	WT5551
Marking Code	G1

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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