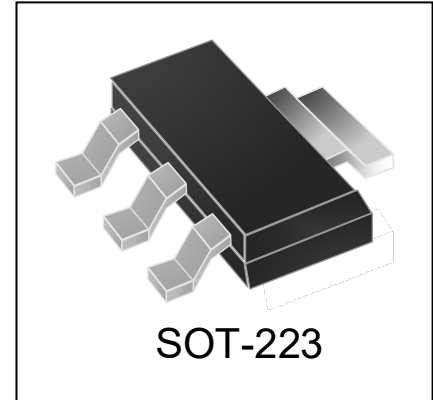


Features

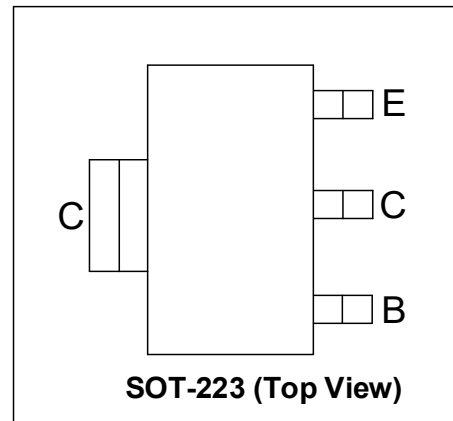
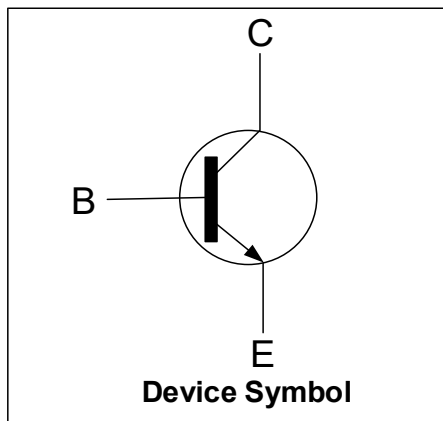
- Complementary to WT5401N
- Ideal Suited for Automated Assembly Processes
- Ideal for Medium Power Amplification and Switching

Mechanical Characteristics

- SOT-223 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
Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	125	°C/W

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	180	-	-	V	
Collector-Emitter Breakdown Voltage ¹	$V_{(BR)CEO}$	$I_C = 1mA, I_B = 0$	160	-	-	V	
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	6	-	-	V	
Collector Cut-off Current	I_{CBO}	$V_{CB} = 120V, I_E = 0$	$T_A=25^{\circ}C$	-	-	50	nA
			$T_A=125^{\circ}C$	-	-	50	
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 4V, I_C = 0$	-	-	50	nA	
DC Current Gain ¹	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 1mA$	80	-	-	-	
	$h_{FE(2)}$	$V_{CE} = 5V, I_C = 10mA$	80	-	250	-	
	$h_{FE(3)}$	$V_{CE} = 5V, I_C = 50mA$	30	-	-	-	
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	$V_{CE}=10V, I_C=10mA, f=1kHz$	100	-	300	MHz	
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	5	-	pF	
Noise Figure	NF	$V_{CE}=5V, I_C=-200\mu A, R_s=1\Omega, f=10Hz$ to 15.7kHz	-	-	8	dB	

Note:

Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$

Typical Characteristics

Figure 1. Static Characteristics

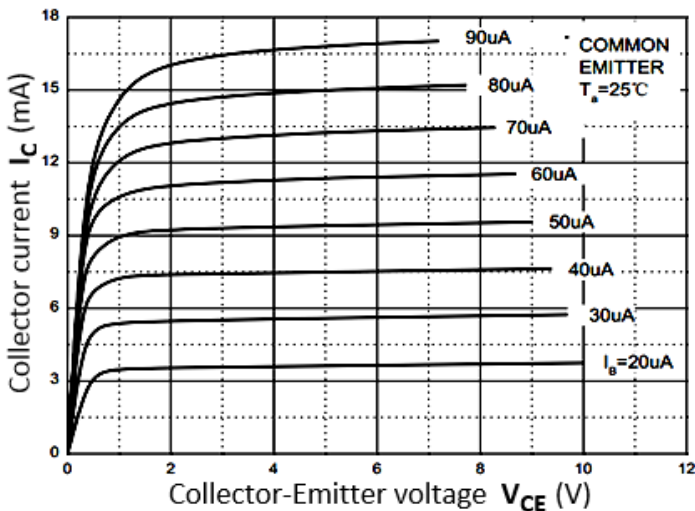


Figure 2. h_{FE} vs. I_C

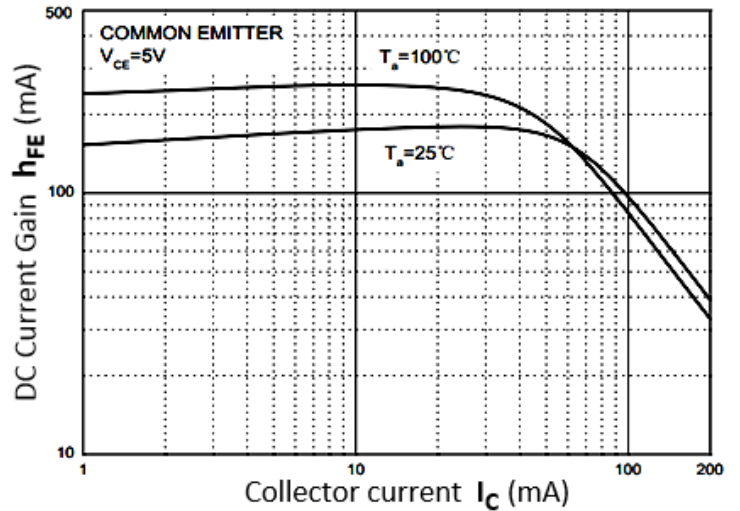


Figure 3. $V_{BE(sat)}$ vs. I_C

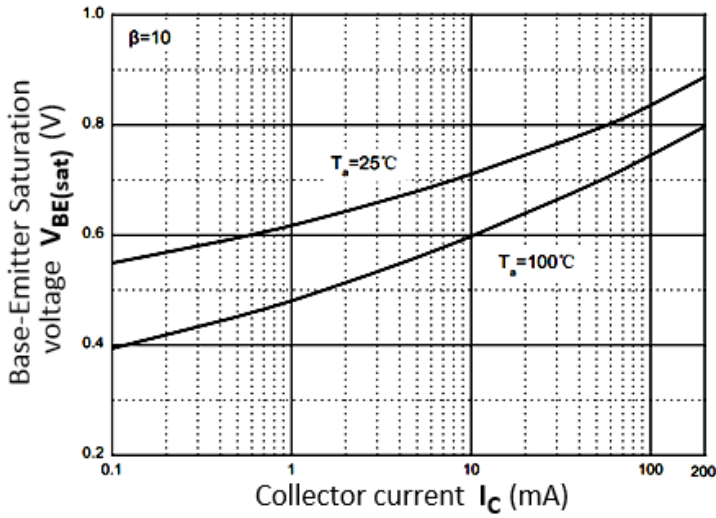


Figure 4. $V_{CE(sat)}$ vs. I_C

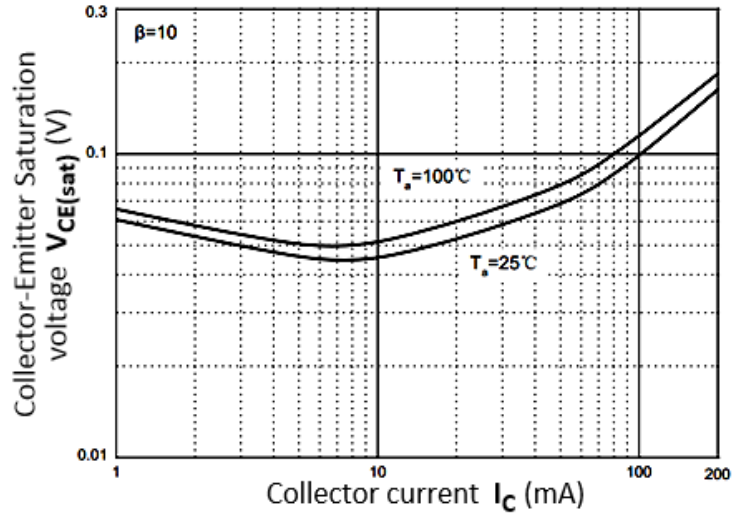


Figure 5. I_C vs. V_{BE}

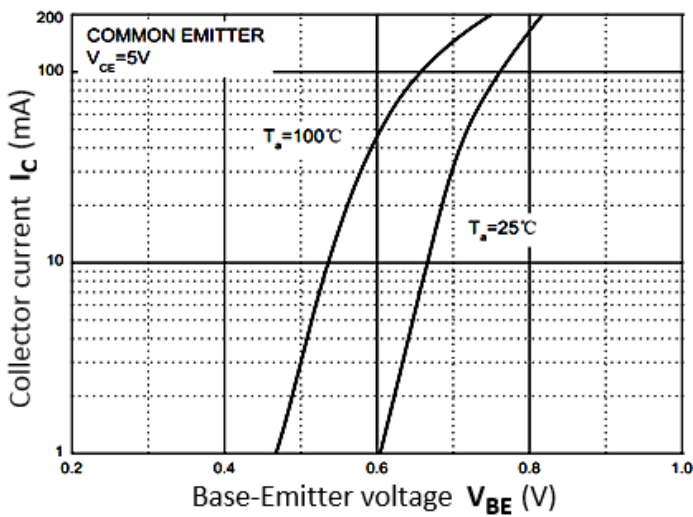


Figure 6. C_{ob} / C_{ib} vs. V_{CB} / V_{EB}

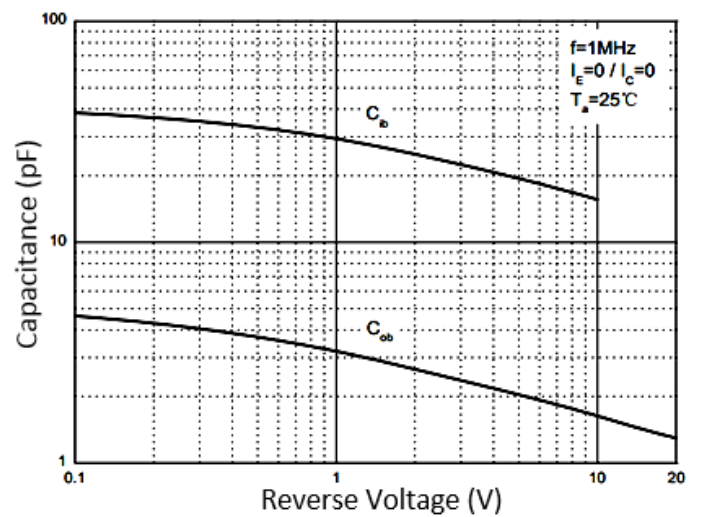


Figure 7. f_T vs. I_C

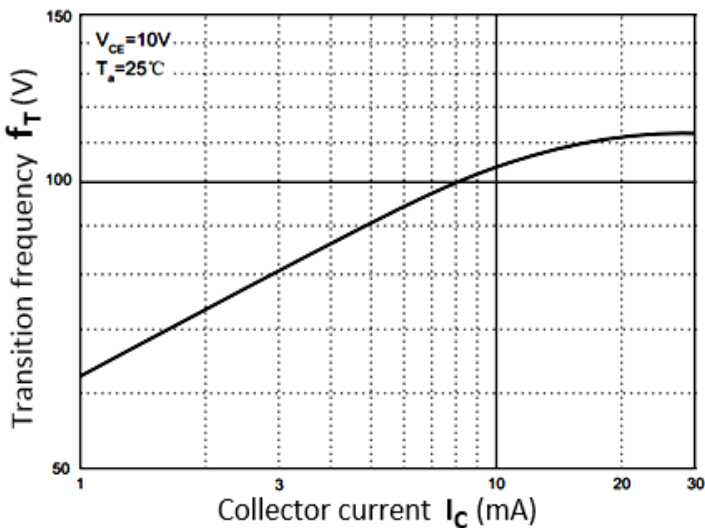
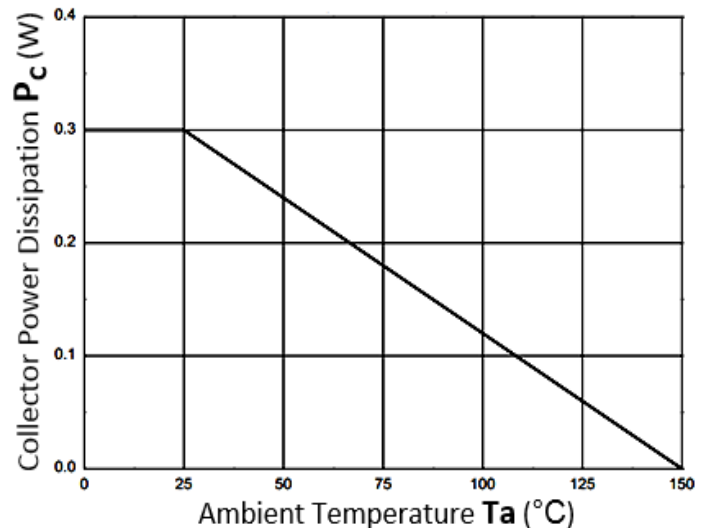
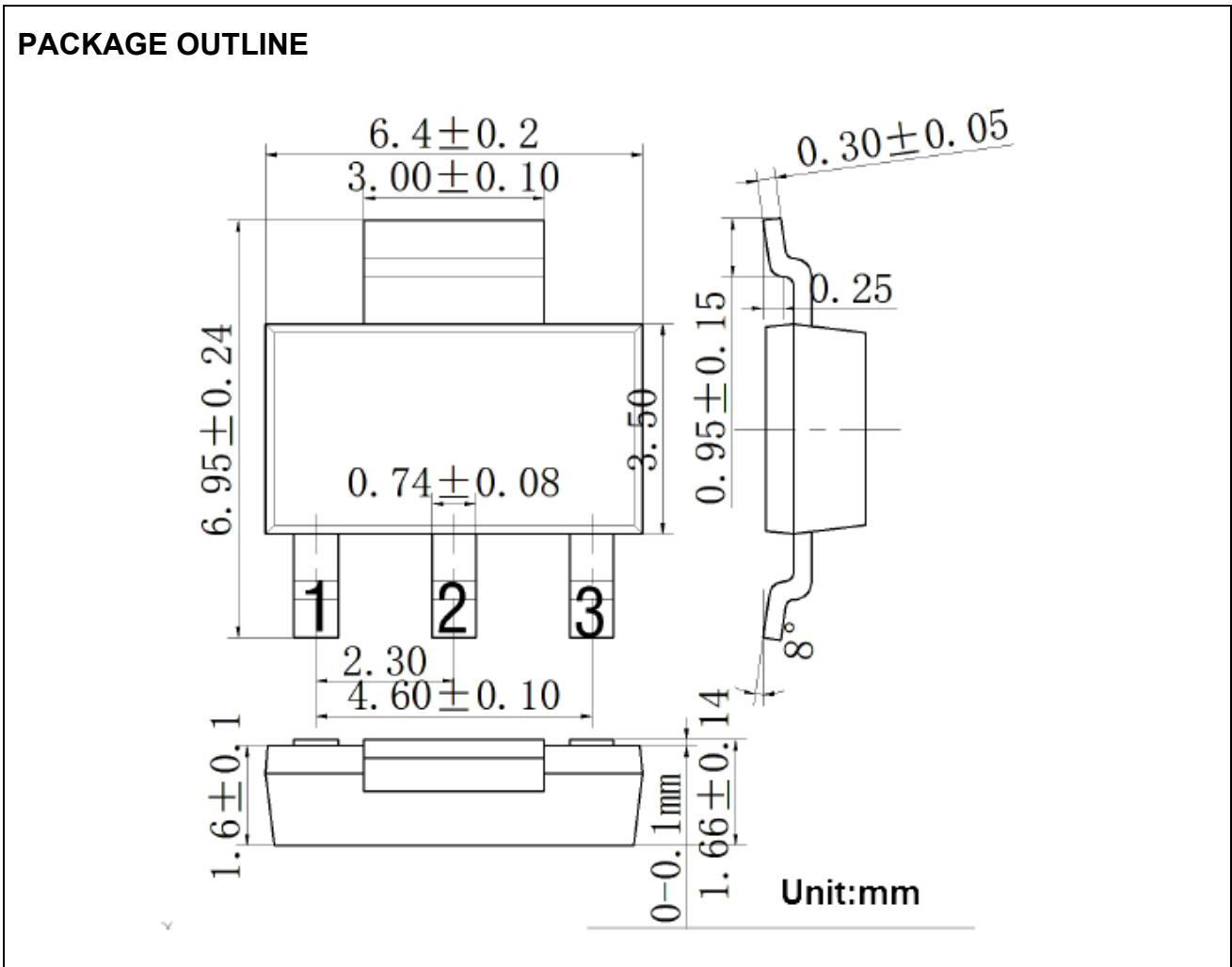


Figure 8. P_C vs. T_a



Outline Drawing – SOT-223



Marking Codes

Part Number	WT5551N
Marking Code	

Package Information

Qty: 2.5k/Reel

CONTACT INFORMATION

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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.*