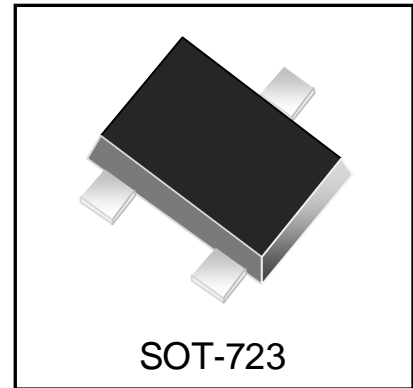


### Features

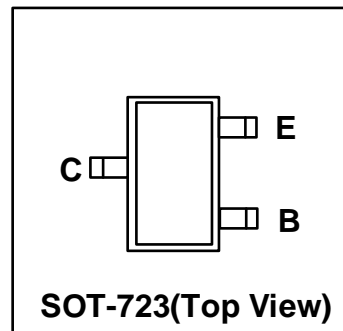
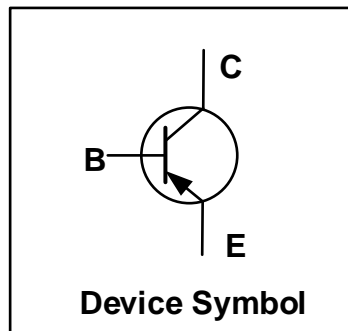
- Complementary to WT3904H
- Epitaxial Planar Die Construction
- Ideal for Low Power Amplification and Switching

### Mechanical Characteristics

- SOT-723 Package
- Marking : Making Code
- RoHS Compliant



### Schematic & PIN Configuration



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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	-40	V
Collector Emitter Voltage	$V_{CEO}$	-40	V
Emitter Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-200	mA
Collector Power Dissipation	$P_C$	100	mW
Junction Temperature	$T_j$	150	$^{\circ}\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^{\circ}\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	1160	$^{\circ}\text{C/W}$

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-40	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5	-	-	V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -40\text{V}, I_E = 0$	-	-	-100	nA
Collector Cut-off Current	$I_{CEX}$	$V_{CE} = -30\text{V}, V_{BE(off)} = -3\text{V}$	-	-	-50	
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-100	
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	100	-	300	-
	$h_{FE(2)}$	$V_{CE} = -1\text{V}, I_C = -50\text{mA}$	60	-	-	
	$h_{FE(3)}$	$V_{CE} = -2\text{V}, I_C = -100\text{mA}$	30	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$	-	-	-0.95	V
Transition Frequency	$f_T$	$V_{CE} = -20\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$	300	-	-	MHz
Delay Time	$t_d$	$V_{CC} = -3\text{V}, V_{BC} = -0.5\text{V}, I_C = -10\text{mA}, I_{B1} = -1\text{mA}$	-	27	-	ns
Rise Time	$t_r$		-	28	-	ns
Storage Time	$t_s$		-	215	-	ns
Fall Time	$t_f$		-	68	-	ns

Typical Characteristics

Figure 1. Static Characteristic

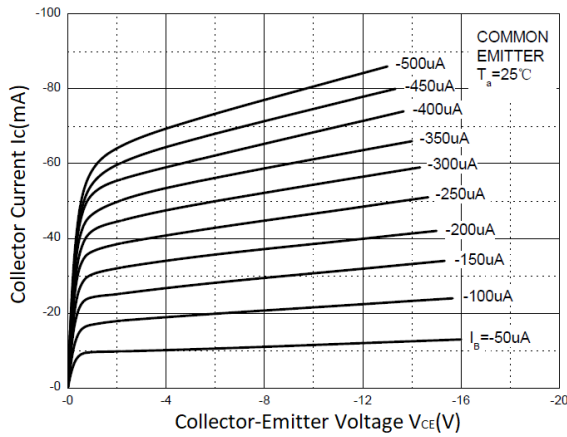


Figure 2.  $h_{FE}$  vs.  $I_c$

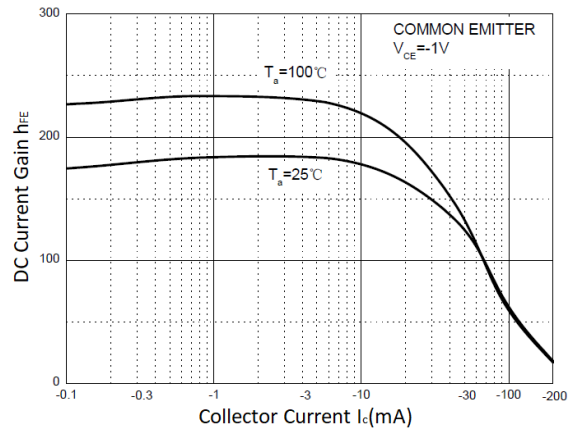


Figure 3.  $V_{CE(sat)}$  vs.  $I_c$

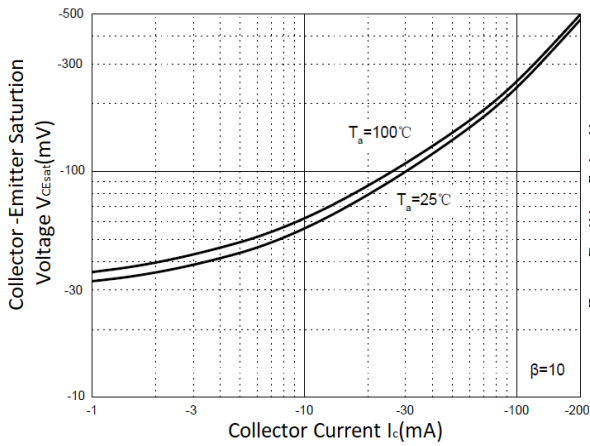


Figure 4.  $V_{BE(sat)}$  vs.  $I_c$

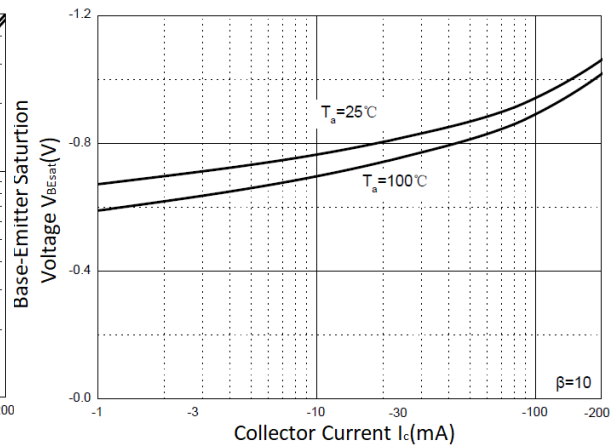


Figure 5.  $I_c$  vs.  $V_{BE}$

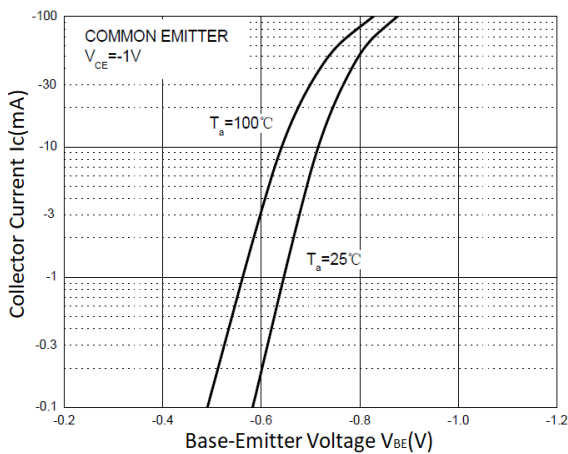


Figure 6.  $C_{ob} / C_{ib}$  vs.  $V_{CB} / V_{EB}$

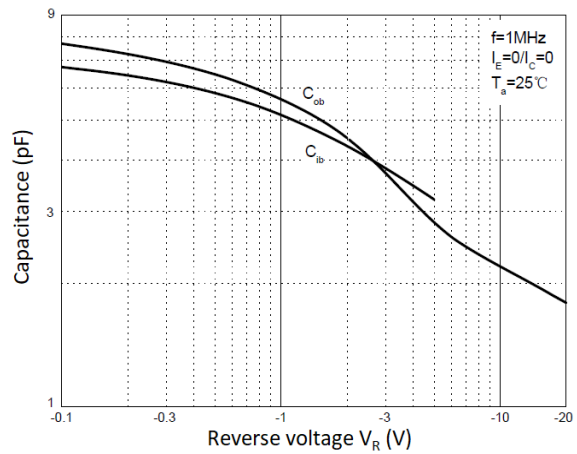


Figure 7.  $f_T$  vs.  $I_c$

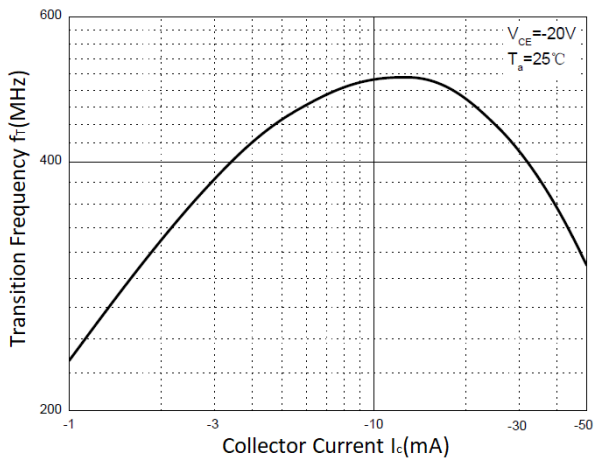
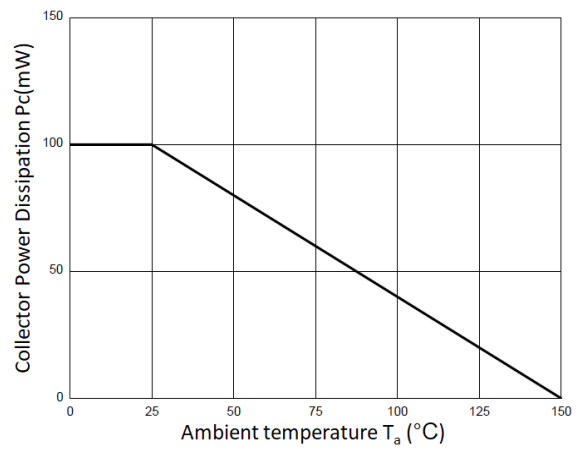


Figure 8.  $P_C$  vs.  $T_a$



Outline Drawing – SOT-723

### PACKAGE OUTLINE

SOT-723

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.450	0.550	0.018	0.022
b	0.150	0.270	0.0059	0.0106
b1	0.250	0.370	0.010	0.015
L	0.150	0.250	0.006	0.010
C	0.070	0.170	0.0028	0.0067
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.400BSC		0.016 BSC	
θ	7°	11°	7°	11°

DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	0.0157	0.40
M	0.039	1.0
e	0.0157	0.40
e1	0.0314	0.80
b	0.0157	0.40

**Notes**

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Millimeters.

Marking Codes

Part Number	WT3906H
Marking Code	

Package Information

Qty: 8k/Reel

CONTACT INFORMATION

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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.