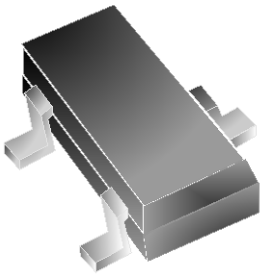
WT817G

NPN Silicon Transistor

Features

- Small Package
- Collector Current: I_C=0.5A
- For High-Speed Switching Applications
- Low Current Leakage

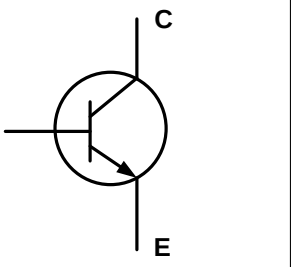


SOT-323

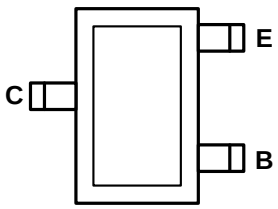
Mechanical Characteristics

- SOT-323 Package
- Marking : Making Code
- RoHS Compliant

Schematic & PIN Configuration



Device Symbol



SOT-323 (Top view)

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	0.5	A
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55 ~ 150	°C
Thermal Resistance from Junction To Ambient	$R_{\Theta JA}$	625	°C/W

Electrical Characteristics (Ta=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	50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10mA, I_B = 0	45	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 1μA, I_C = 0	5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} =20V, I_E = 0	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	V_{EB} =5V, I_C = 0	-	-	100	nA
DC Current Gain	$h_{FE(1)}$	V_{CE} = 1V, I_C = 100mA	160	-	400	-
	$h_{FE(2)}$	V_{CE} = 1V, I_C = 500mA	40	-	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 50mA	-	-	1.2	V
Base-Emitter Voltage	$V_{BE(on)}$	V_{CE} =1V ,I_C =500mA	-	-	1.2	V
Transition Frequency	f_T	V_{CE} =5V, I_C = 10mA, f=100MHz	100	-	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB} =10 V; f = 1MHz	-	8.5	-	pF

Typical Characteristics

Figure 1. Static Characteristics

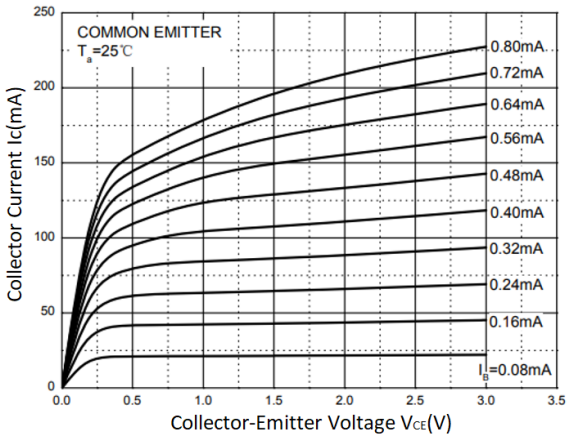


Figure 2. h_{FE} vs. I_C

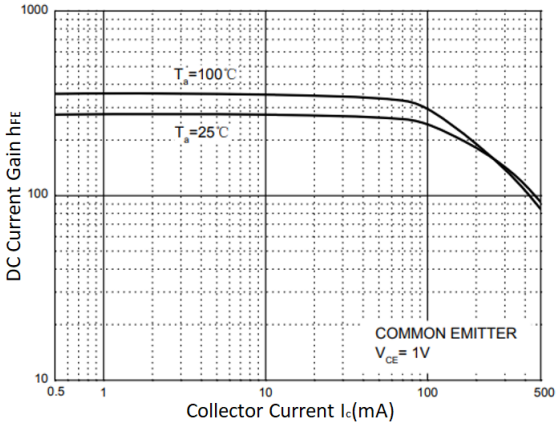


Figure 3. $V_{BE(sat)}$ vs. I_C

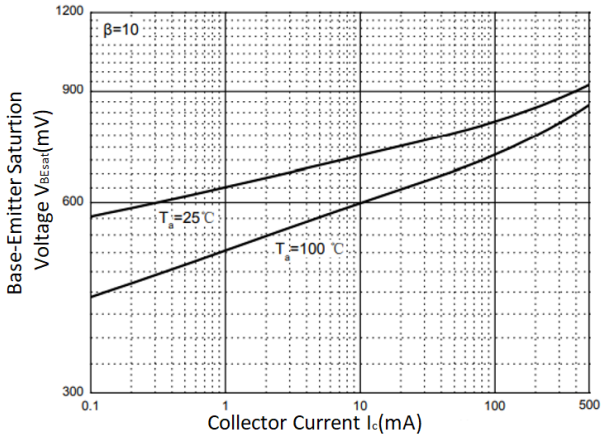


Figure 4. $V_{CE(sat)}$ vs. I_C

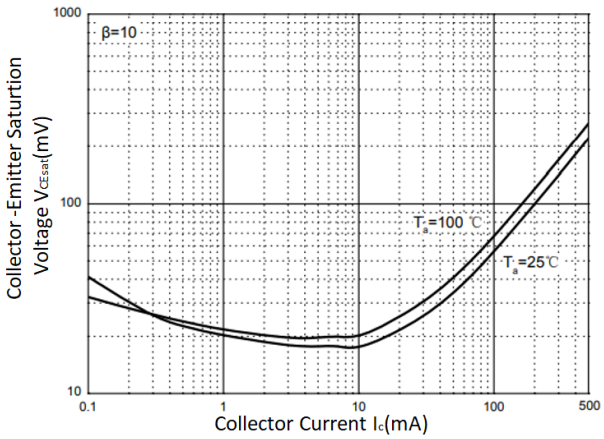


Figure 5. I_C vs. V_{BE}

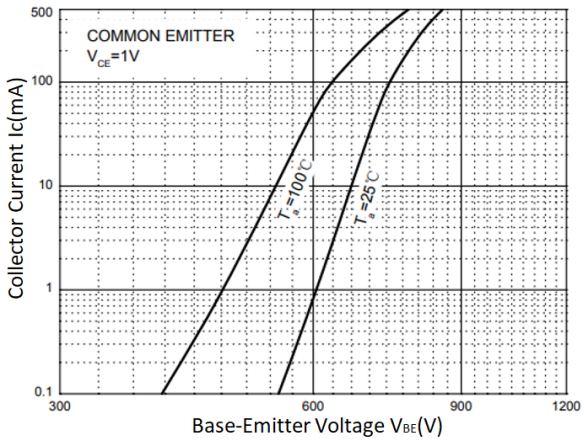


Figure 6. f_T vs. I_C

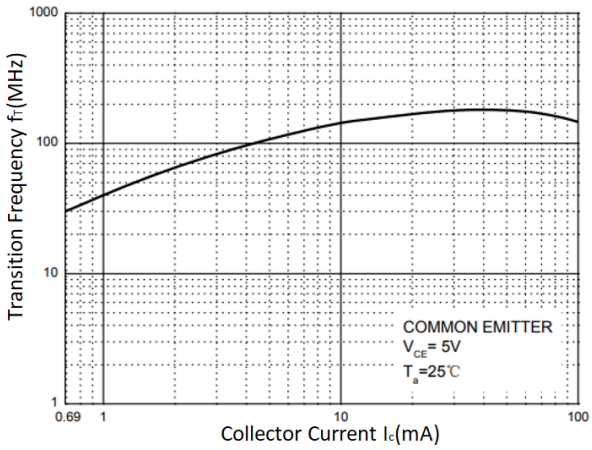


Figure 7. C_{ob} / C_{ib} vs. V_{CB} / V_{EB}

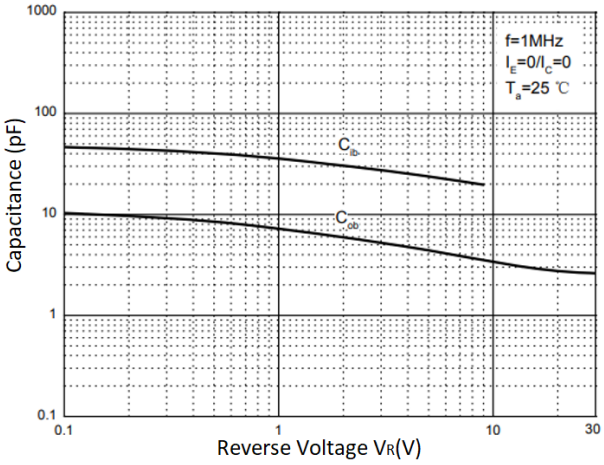
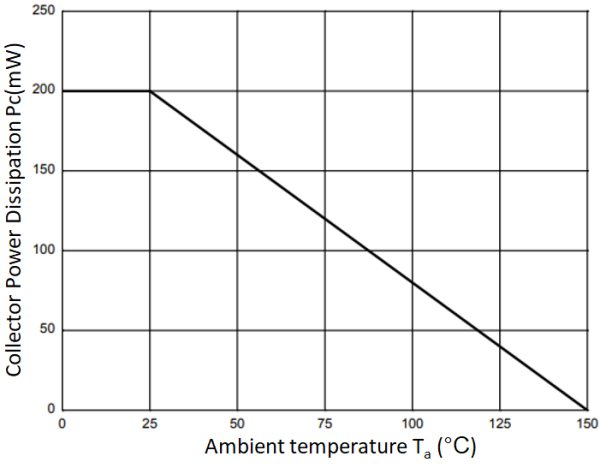
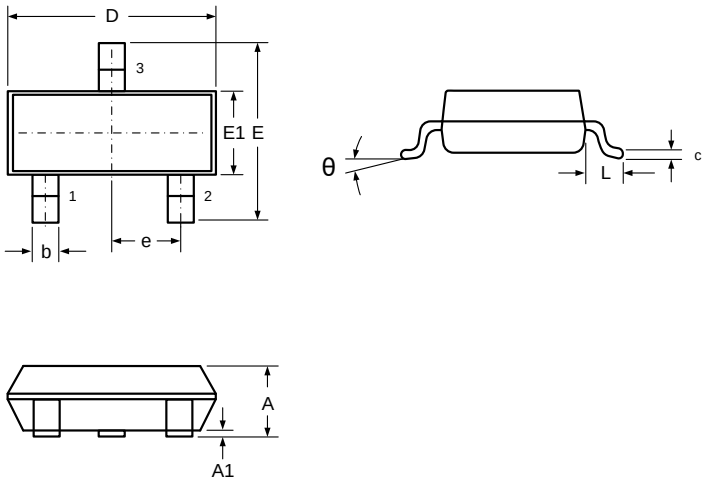


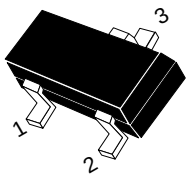
Figure 8. P_C vs. T_a



Outline Drawing – SOT-323

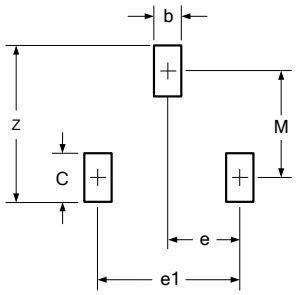
PACKAGE OUTLINE





SOT-323

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
D	2.000	2.200	0.079	0.087
b	0.300	0.500	0.012	0.020
c	0.100	0.150	0.004	0.006
E	2.150	2.450	0.085	0.096
E1	1.150	1.350	0.045	0.053
e	0.650TYP		0.026TYP	
L	0.525 REF		0.021 REF	
θ	0	8°	0	8°

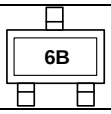


DIMENSIONS		
DIM	INCHES	MILLIMETERS
M	0.076	1.90
C	0.036	0.9
Z	0.108	2.7
e	0.026	0.65
e1	0.052	1.30
b	0.028	0.7

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	WT817G
Marking Code	

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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For additional information, please contact your local Sales Representative.