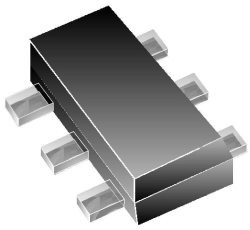
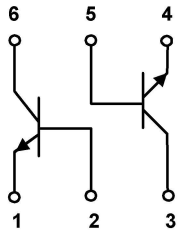
WT847BCW

Dual NPN Transistor





SOT-563

Features

- Low collector capacitance
- Low collector-emitter saturation voltage
- Closely matched current gain
- Ideal for Low Power Amplification and Switching

Mechanical Characteristics

- SOT-563 package
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant & HF
- Device meets MSL3 requirement

Absolute Maximum Rating - NPN(Tamb=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current Continuous	I_C	0.1	A
Power Dissipation	P_D	0.2	W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	625	°C /W
Operating Junction Temperature Range	T_J	-55 ~ 150	°C
Storage Temperature Range	T_{STG}	-55 ~ 150	°C

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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	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 = 10μA, I_C = 0	6	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = 30V, I_E = 0	-	-	15	nA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 5V, I_C = 0	-	-	100	nA
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 2mA	200	-	450	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 0.5mA	-	-	0.1	V
		I_C = 100mA, I_B = 5mA	-	-	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 10mA, I_B = 0.5mA	-	0.7	-	V
		I_C = 100mA, I_B = 5mA	-	0.9	-	V
Base-Emitter Voltage	$V_{BE(on)}$	V_{CE} = 5V, I_C = 2mA	-	-	0.70	V
		V_{CE} = 5V, I_C = 10mA	-	-	0.77	V
Transition Frequency	f_T	V_{CE}=5V,I_C=10mA, f=100MHz	100	-	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10V, f = 1MHz	-	-	4.5	pF

Typical Characteristics

Figure 1. Static Characteristics

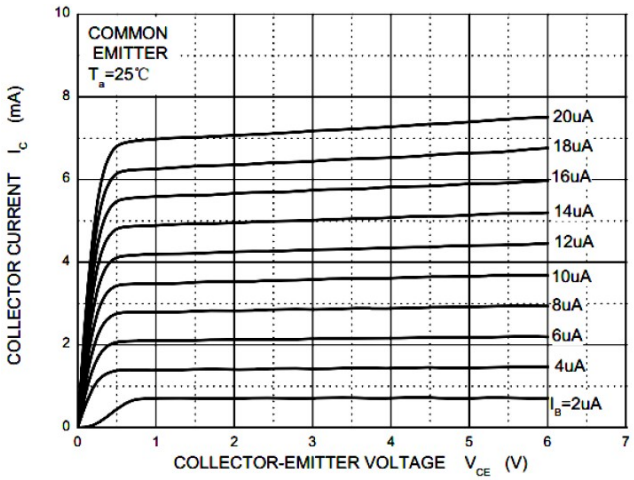


Figure 2. h_{FE} vs. I_C

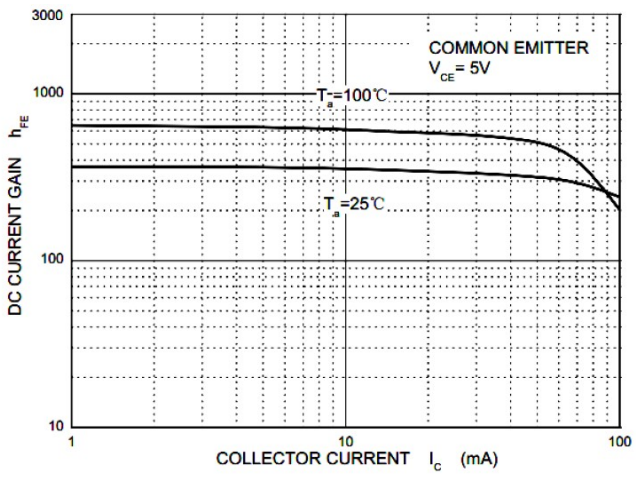


Figure 3. $V_{BE(sat)}$ vs. I_C

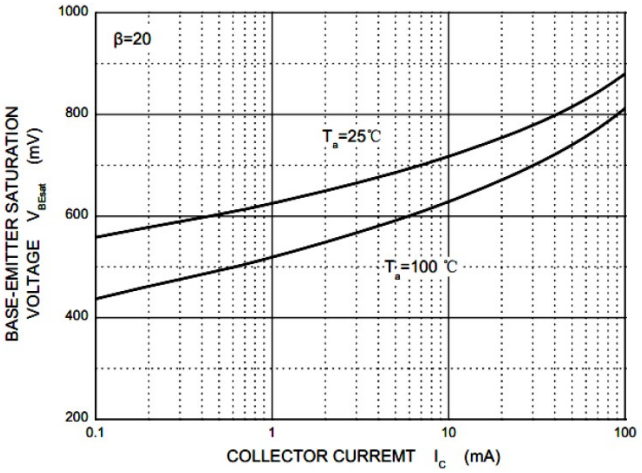


Figure 4. $V_{CE(sat)}$ vs. I_C

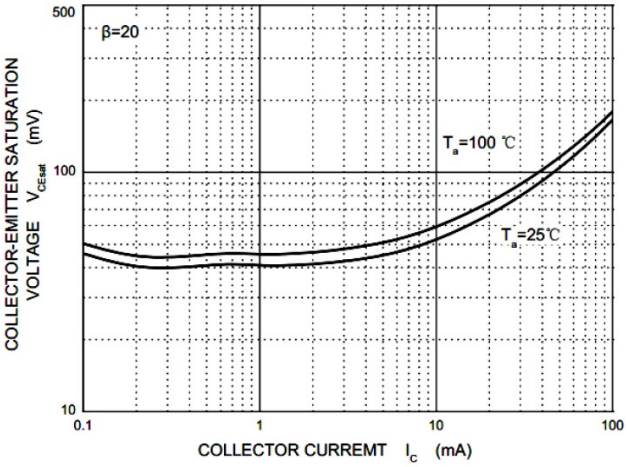


Figure 5. I_C vs. V_{BE}

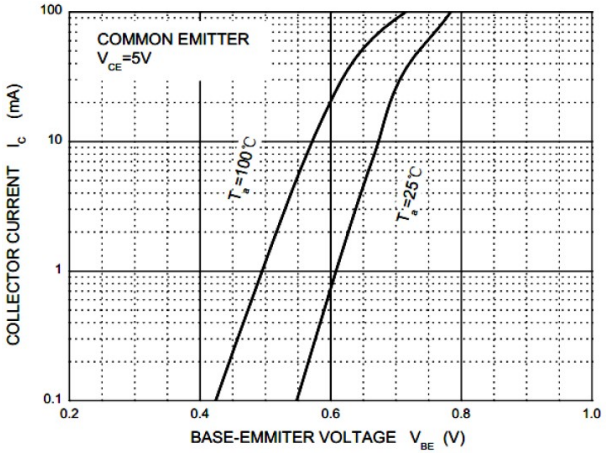


Figure 6. f_T vs. I_C

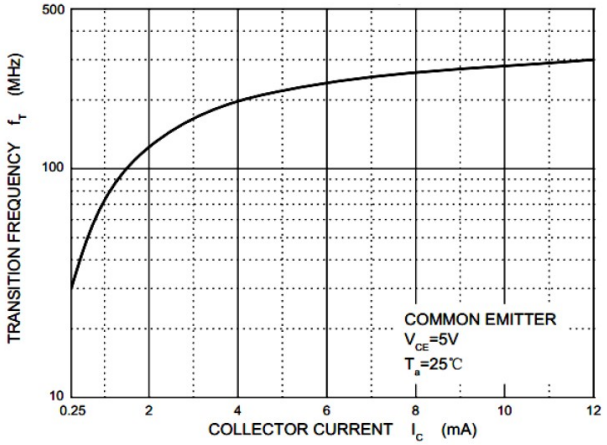
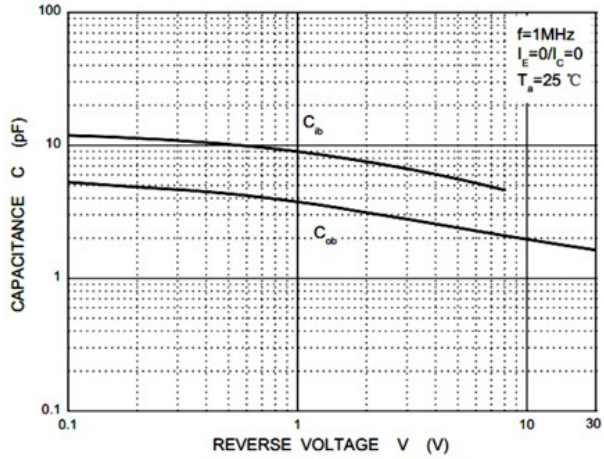
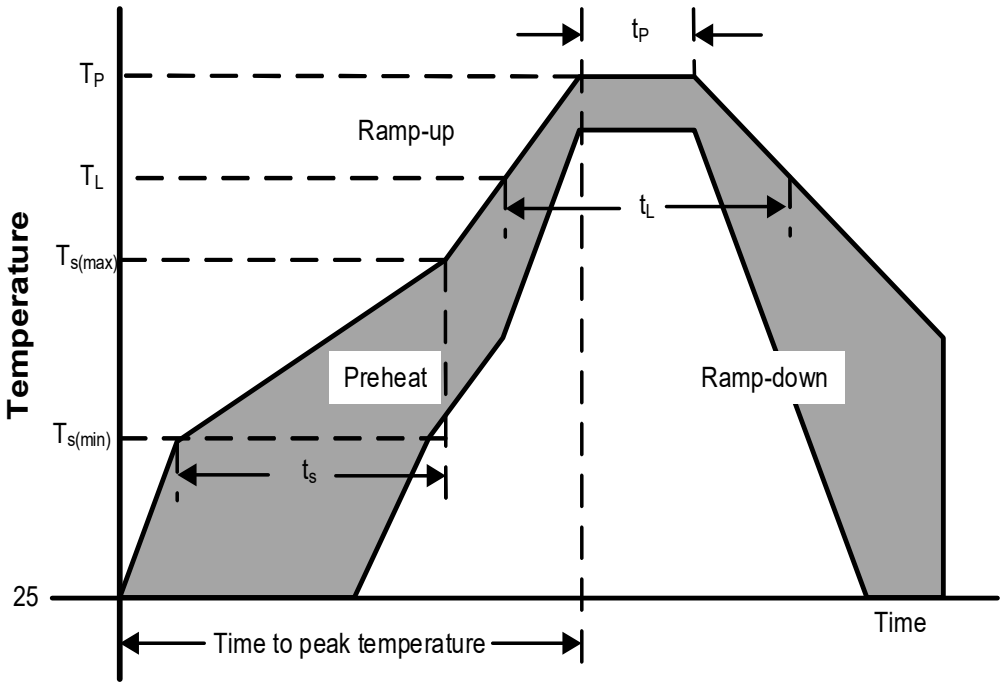


Figure 7. C_{ob} / C_{ib} vs. V_{CB} / V_{EB}



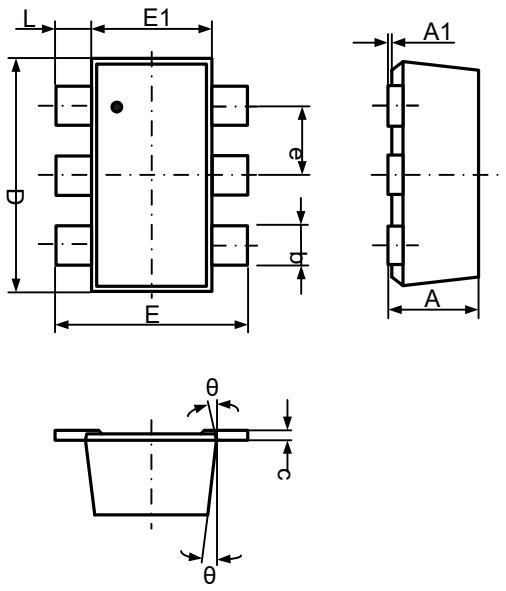
Soldering Parameters

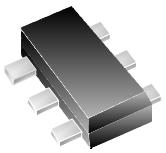
Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (ts)	60 – 190 secs
Average ramp up rate (Liquidus Temp) (T_L) to peak		5°C/second max
$T_{S(max)}$ to T_L——Ramp-up Rate		5°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5 °C
Time within actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.
Do not exceed		280°C



Outline Drawing – SOT-563

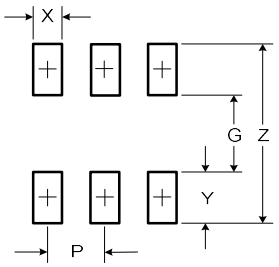
PACKAGE OUTLINE





SOT-563

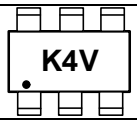
SYMBOL	MILLIMETERS	
	MIN	MAX
A	0.500	0.600
A1	0.000	0.050
e	0.450	0.550
c	0.090	0.160
D	1.500	1.700
b	0.130	0.300
E1	1.100	1.300
E	1.400	1.800
L	0.100	0.300
θ	7°REF	



DIM	MILLIMETERS
Z	1.91
G	0.89
P	0.51 TYP
X	0.3
Y	0.51

Notes:
Controlling Dimension: Millimeter.

Marking Codes

Part Number	WT847BCW
Marking Code	

Package Information

Qty：3k/Reel

CONTACT INFORMATION

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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.

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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.