

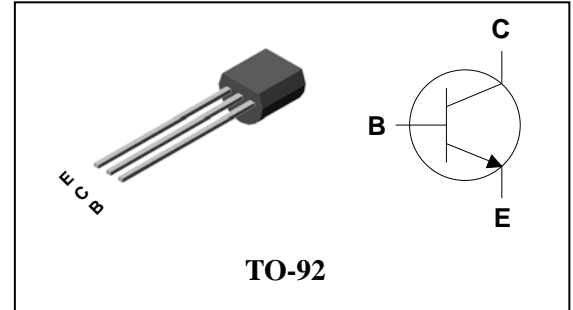
Features

- High Voltage, high speed switching
- $V_{CEO(sus)} = 530V$
- Suitable for Switching Regulator and Motor Control, Electronic Ballast

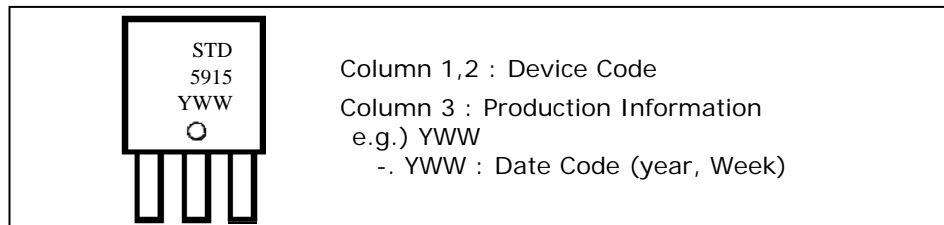
Ordering Information

Type NO.	Marking	Package Code
STD5915	STD5915	TO-92

PIN Connection



Marking Diagram



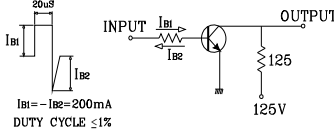
Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-base voltage	V_{CBO}	900	V
Collector-emitter voltage	V_{CEO}	530	V
Emitter-base voltage	V_{EBO}	9	V
Collector current (DC)	I_C	1.5	A
Collector current (Pulse)	I_{CP}	3	A
Base current (DC)	I_B	0.75	A
Collector power dissipation	P_C	1.1	W
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55 ~ 150	°C

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	900	-	-	V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=10mA, I_B=0$	530	-	-	V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=100\mu A, I_C=0$	9	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=900V, I_E=0$	-	-	10	μA
Collector cut-off current	I_{CEO}	$V_{CE}=530V, I_B=0$	-	-	1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=9V, I_C=0$	-	-	10	μA
DC current gain	h_{FE}^*	$I_C=0.4A, V_{CE}=10V$	20	-	40	-
		$I_C=1A, V_{CE}=10V$	6	-	40	-
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=0.5A, I_B=0.1A$	-	-	0.8	V
		$I_C=1A, I_B=0.25A$	-	-	1	
		$I_C=1.5A, I_B=0.5A$	-	-	2.5	
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C=0.5A, I_B=0.1A$	-	-	1	V
		$I_C=1A, I_B=0.25A$	-	-	1.2	
Transition frequency	f_T	$V_{CB}=10V, I_C=0.1A, f=1MHz$	4	-	-	MHz
Output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=0.1MHz$	-	11	-	pF
Turn on Time	t_{on}	 <p> $I_{B1} = -I_{B2} = 200mA$ DUTY CYCLE $\leq 1\%$ </p>	-	-	1.1	μs
Storage Time	t_{stg}		-	-	4	
Fall Time	t_f		-	-	0.7	

* Pulse test: $PW \leq 300 \mu s$, Duty cycle $\leq 2\%$ Pulse

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

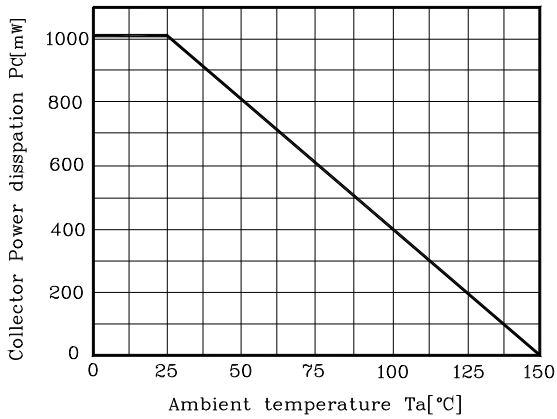


Fig. 2 $I_C - V_{CE}$

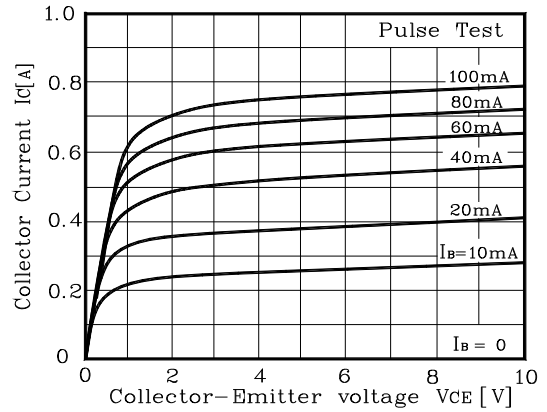


Fig. 3 $V_{CE(sat)} - I_C$

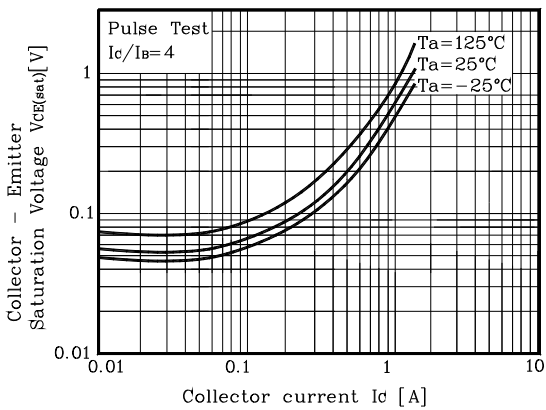


Fig. 4 $V_{BE(sat)} - I_C$

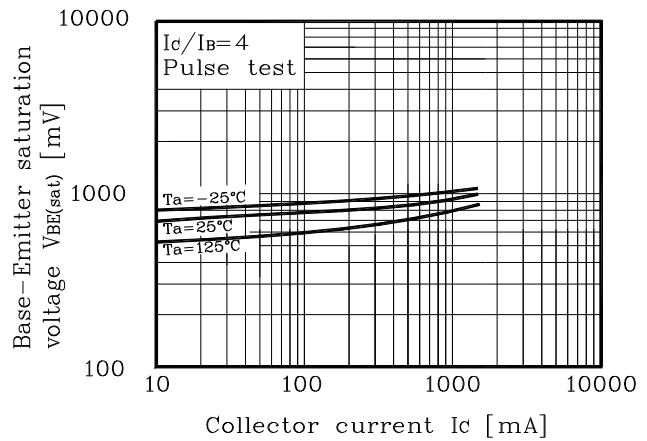


Fig. 5 $h_{FE} - I_C$

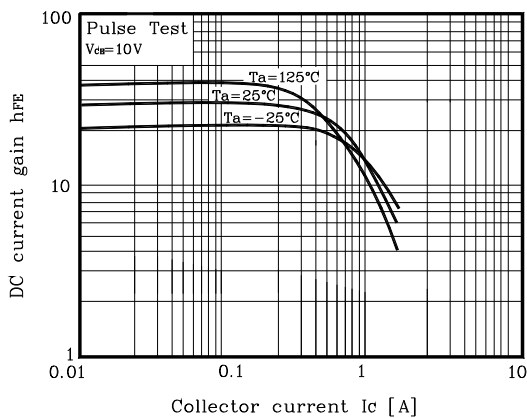
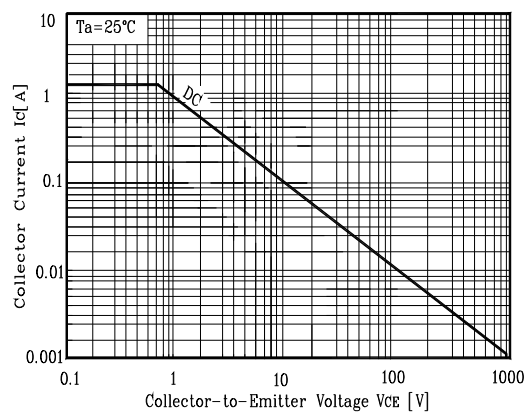


Fig. 6 Safe Operating Area



Electrical Characteristic Curves

Fig. 7 Turn on time

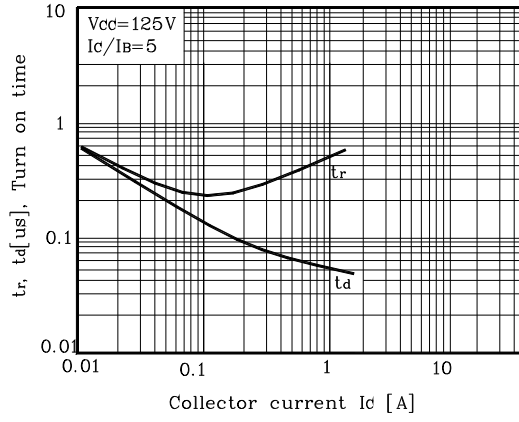
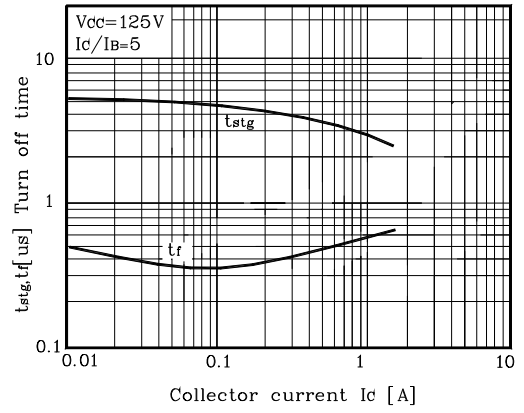
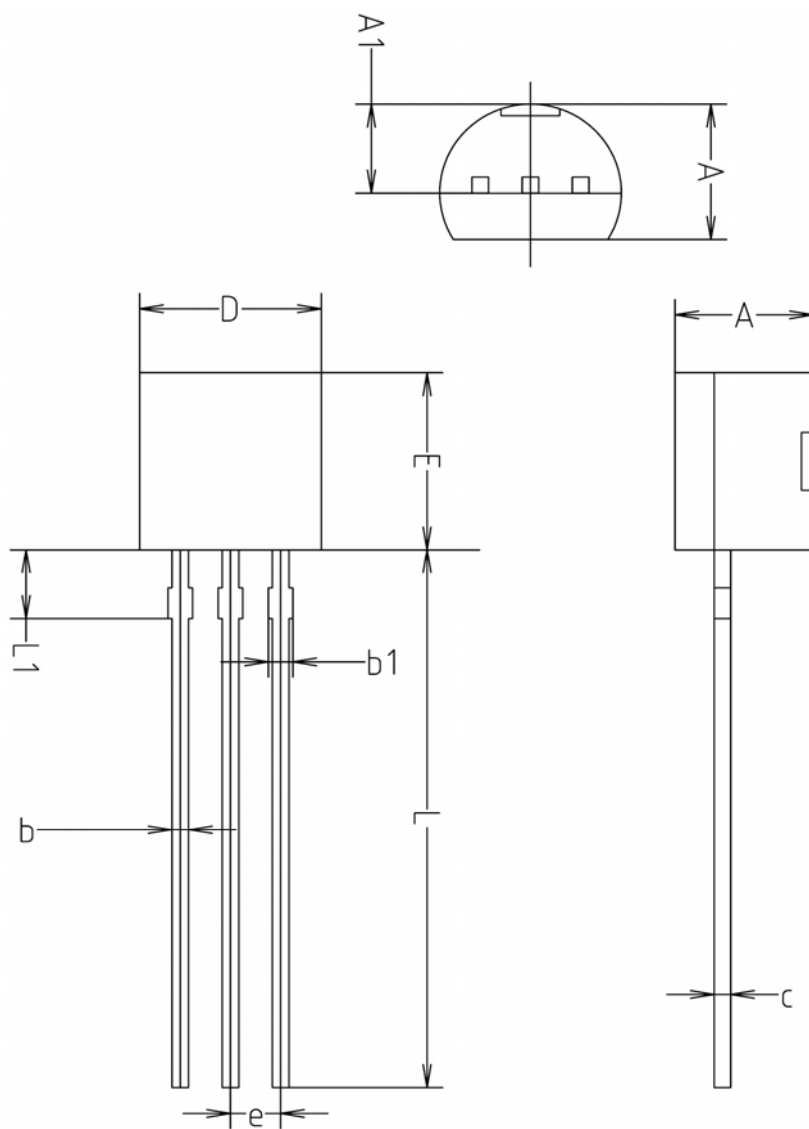


Fig. 8 Turn off time



Outline Dimension (Unit: mm)



SYMBOL	MILLIMETERS(mm)		
	MINIMUM	NOMINAL	MAXIMUM
A	3.40	3.50	3.66
A1	2.46	2.51	2.59
b	0.39	0.44	0.53
b1	0.39	—	0.63
c	0.35	0.42	0.47
D	4.48	4.60	4.70
E	4.48	4.60	4.70
e	1.17	1.27	1.37
L	13.70	14.00	14.77
L1	1.55	1.70	2.15

The AUK Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Corp. cannot accept liability to any damage which may occur in case these AUK Corp. products were used in the mentioned equipments without prior consultation with AUK Corp..

Specifications mentioned in this publication are subject to change without notice.