

**Features**

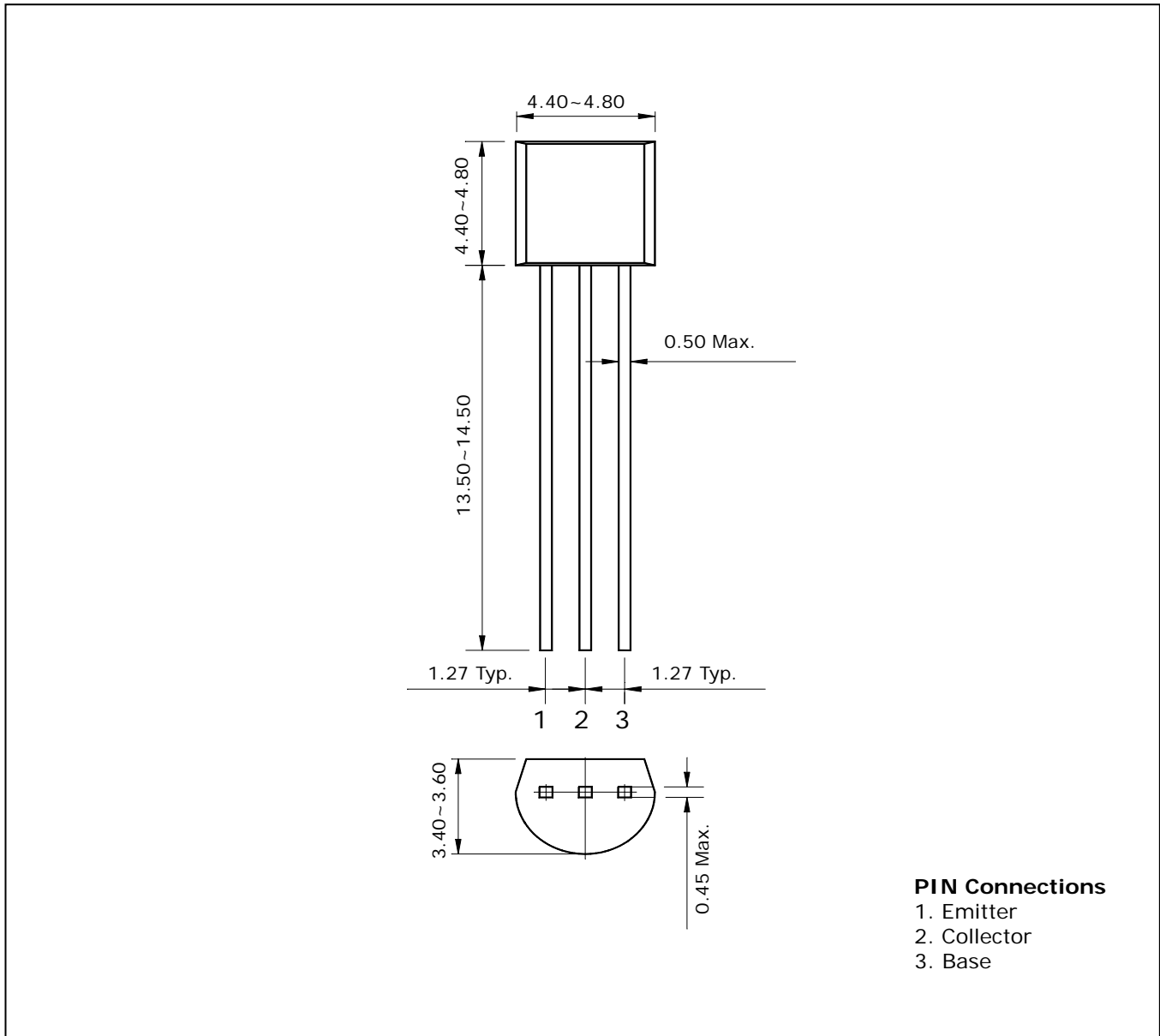
- High Voltage, high speed switching
- $V_{CEO(sus)} = 530V$
- Suitable for Switching Regulator and Motor Control, Electronic Ballast

**Ordering Information**

Type NO.	Marking	Package Code
STD5915	STD5915	TO-92

**Outline Dimensions**

unit : mm



## 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-emitter sustaining voltage	$V_{CE(sus)}^*$	$I_C=10mA, I_B=0$	530	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=900V, I_E=0$	-	-	10	uA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=9V, I_C=0$	-	-	10	uA
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 style="font-size: small;"> <math>I_{BI} = -I_{B2} = 200mA</math>            DUTY CYCLE <math>\leq 1\%</math> </p>	-	-	1.1	$\mu S$
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  $P_C - T_a$

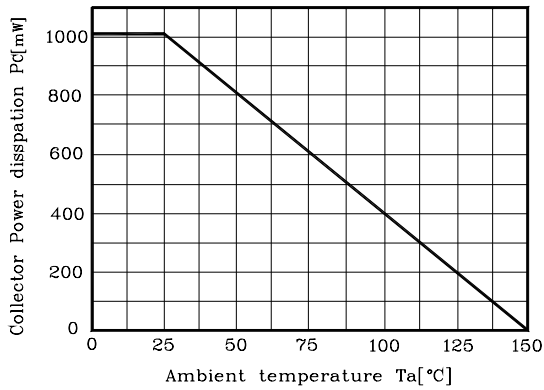


Fig. 2  $I_C - V_{CE}$

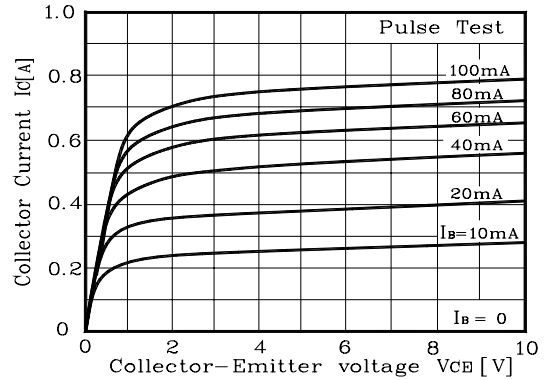


Fig. 3  $V_{CE(sat)} - I_C$

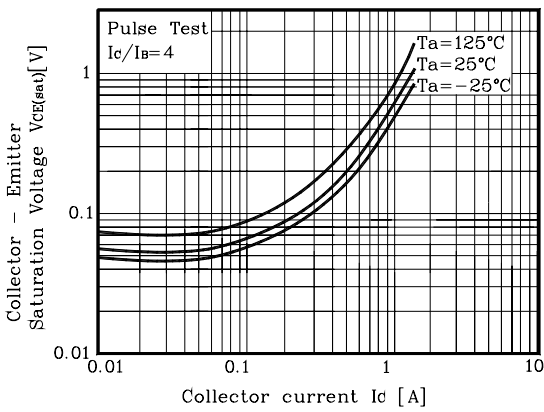


Fig. 4  $V_{BE(sat)} - I_C$

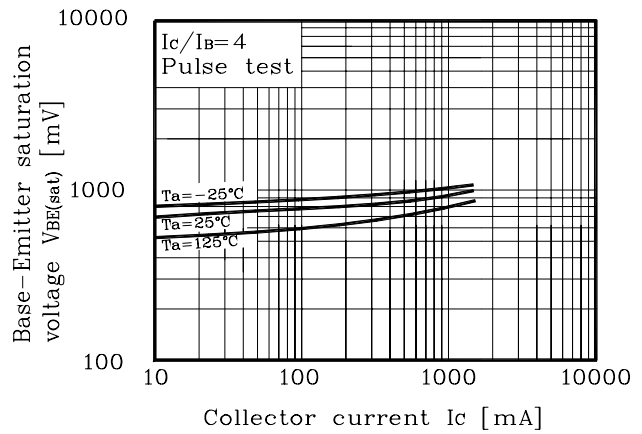


Fig. 5  $h_{FE} - I_C$

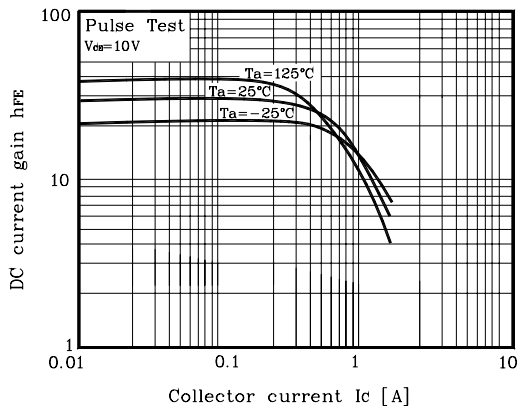
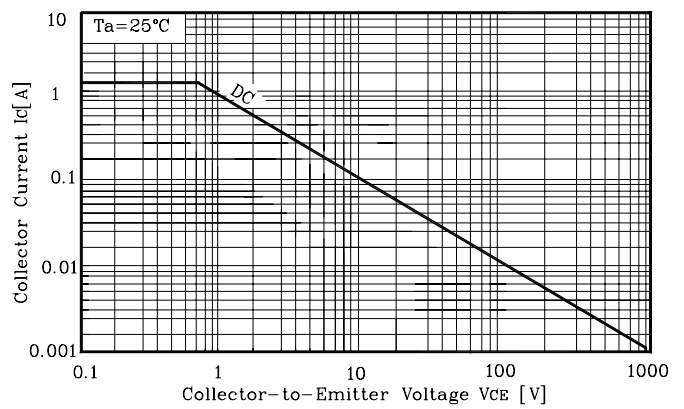


Fig. 6 Safe Operating Area



Electrical Characteristic Curves

Fig. 7 Turn on time

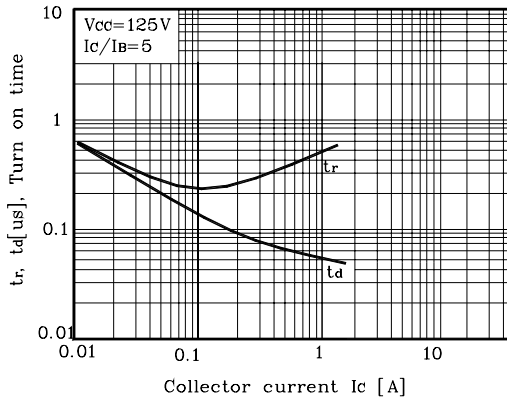
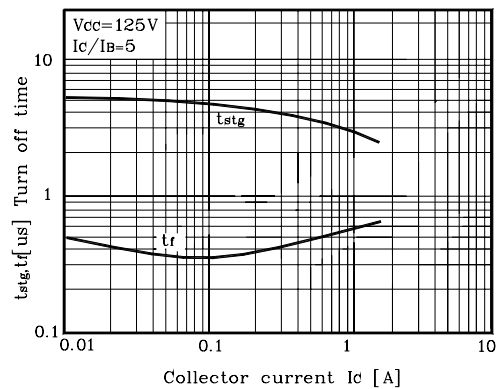


Fig. 8 Turn off time



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