

## Applications

- Power amplifier application
- High current switching application

## Features

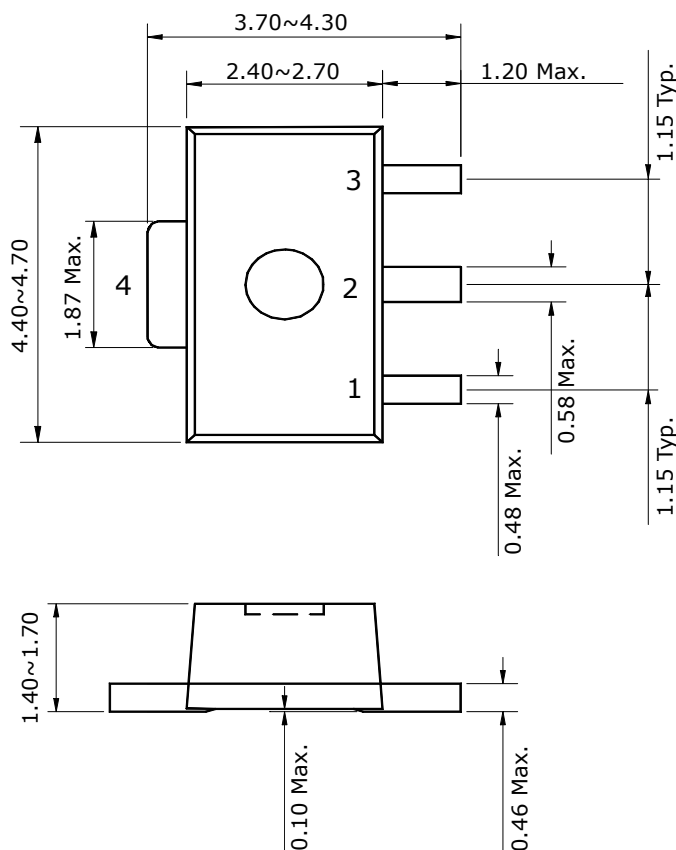
- Low saturation voltage:  $V_{CE(sat)}=0.15V$  Typ. @  $I_C=1A$ ,  $I_B=50mA$
- Large collector current capacity:  $I_C=3A$
- Small and compact SMD type package
- Complementary pair with STA3350F

## Ordering Information

Type NO.	Marking	Package Code
STC4350F	HW8	SOT-89

## Outline Dimensions

unit : mm



### PIN Connections

1. Base
- 2,4. Collector
3. Emitter

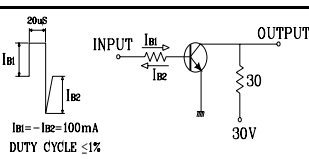
**Absolute Maximum Ratings**

[Ta=25℃]

Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	3	A
Collector Power dissipation	$P_C$	0.5	W
	$P_C^*$	1	W
Junction temperature	$T_J$	150	℃
Storage temperature range	$T_{stg}$	-55~150	℃

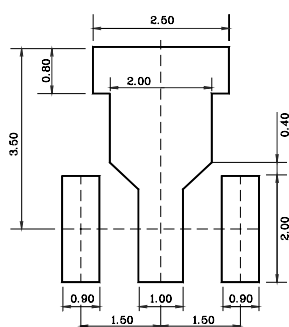
\* Device mounted on ceramic substrate (250mm<sup>2</sup> × 0.8t)**Electrical Characteristics**

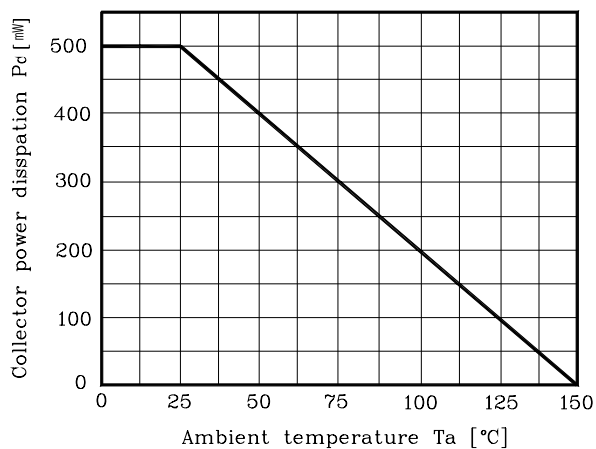
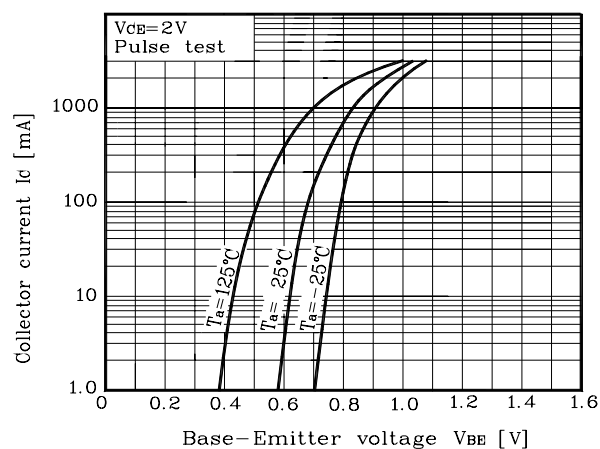
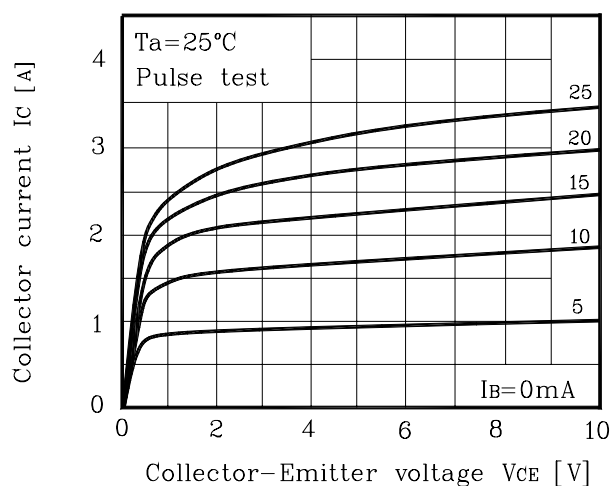
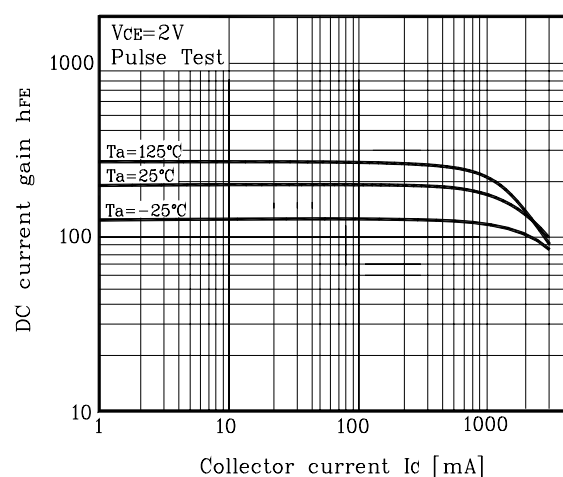
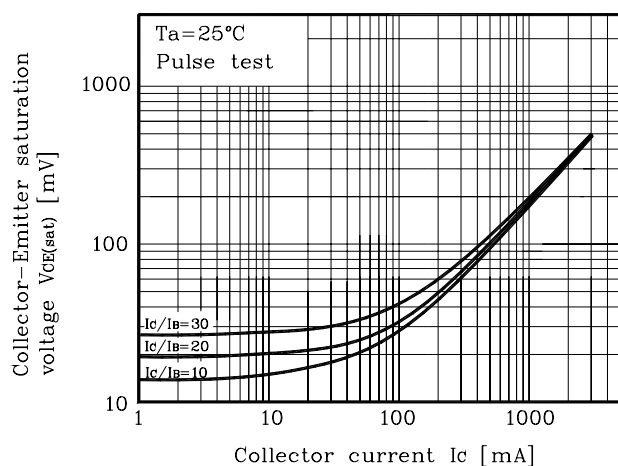
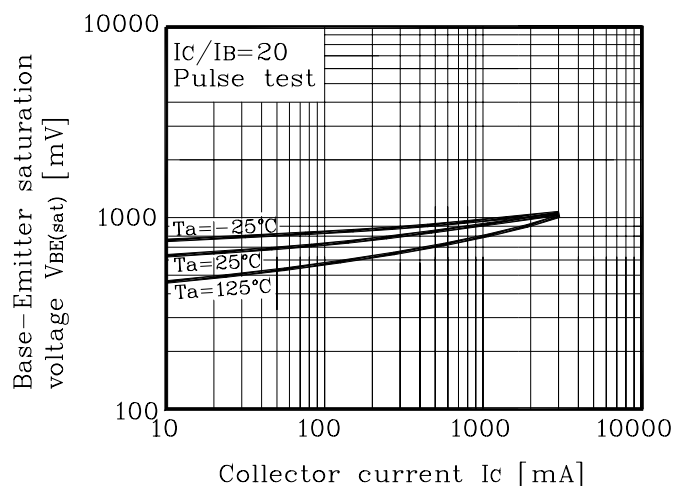
[Ta=25℃]

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage		$BV_{CEO}$	$I_C=10mA, I_B=0$	50	-	-	V
Collector cut-off current		$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	0.1	$\mu A$
Emitter cut-off current		$I_{EBO}$	$V_{EB}=6V, I_C=0$	-	-	0.1	$\mu A$
DC current gain		$h_{FE}$	$V_{CE}=2V, I_C=0.1A^*$	120	-	240	
		$h_{FE}$	$V_{CE}=2V, I_C=2A^*$	40	-	-	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C=2A, I_B=0.1A^*$	-	-	0.35	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C=2A, I_B=0.1A^*$	-	-	1.2	V
Transition frequency		$f_T$	$V_{CE}=10V, I_C=0.05A$	-	210	-	MHz
Collector output capacitance		$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	18	-	pF
Switching Time	Turn-on Time	$t_{on}$		-	100	-	nS
	Storage Time	$t_{stg}$		-	300	-	
	Fall Time	$t_f$		-	50	-	

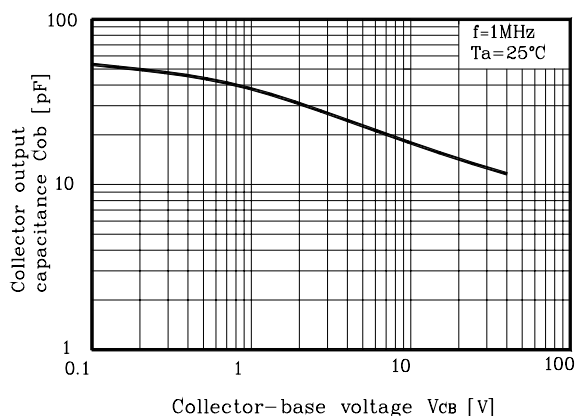
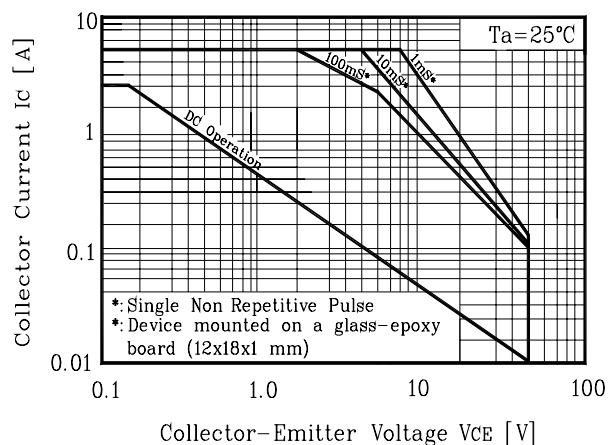
\*: Pulse test :  $t_p \leq 300\mu s$ , Duty cycle  $\leq 2\%$ 

## \* Recommend PCB solder land [Unit: mm]



**Electrical Characteristic Curves****Fig. 1  $P_C - T_a$** **Fig. 2  $I_C - V_{BE}$** **Fig. 3  $I_C - V_{CE}$** **Fig. 4  $h_{FE} - I_C$** **Fig. 5  $V_{CE(sat)} - I_C$** **Fig. 6  $V_{BE(sat)} - I_C$** 

## Electrical Characteristic Curves

**Fig. 7**  $C_{ob} - V_{CB}$ **Fig. 8** Safe Operating Area

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