

## Description

- Complex type bipolar transistor

## Feature

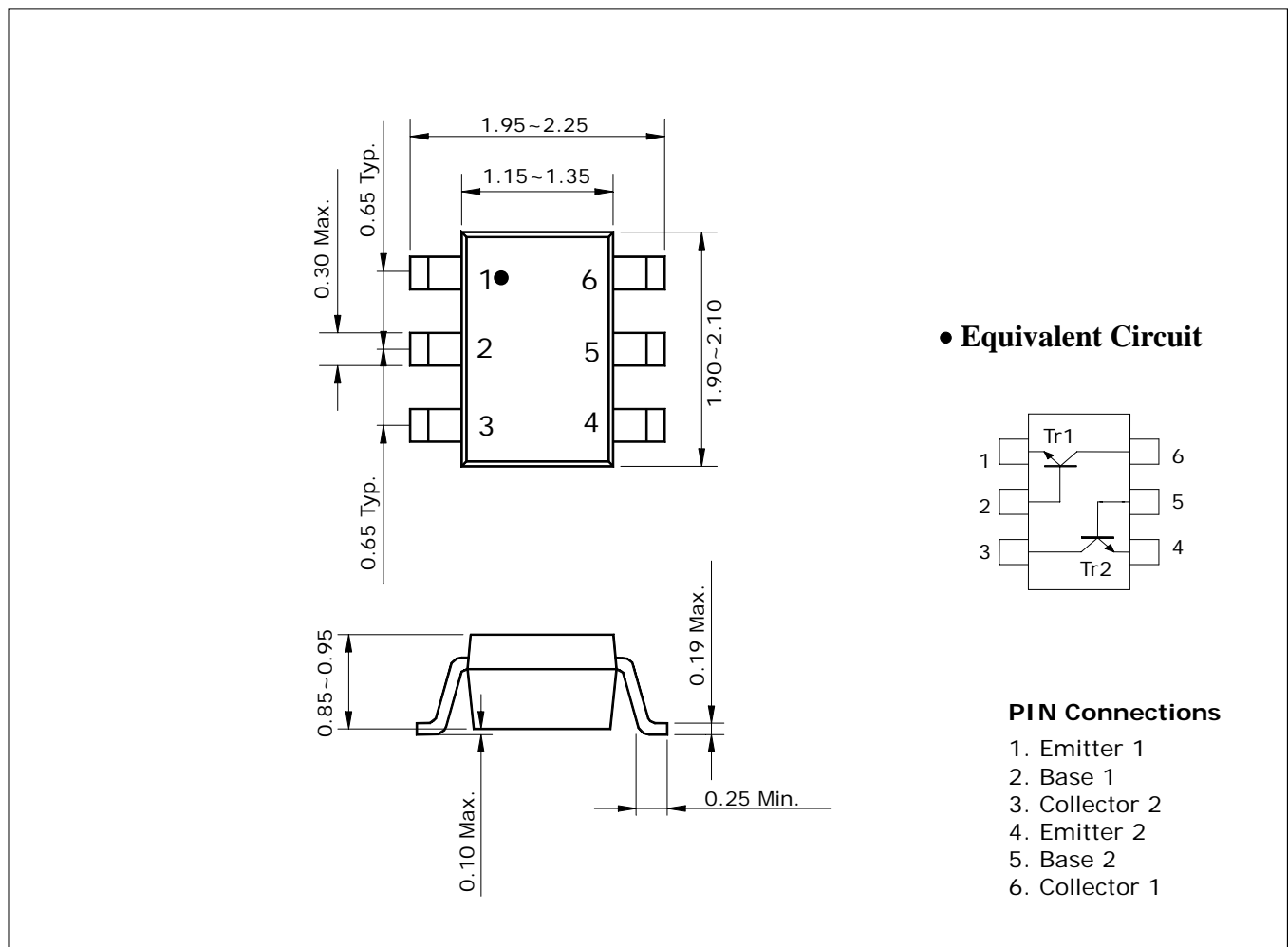
- Small package save PCB area
- Reduce quantity of parts and mounting cost
- Two SBT3904 chips in SOT-363 package

## Ordering Information

Type NO.	Marking	Package Code
SUT390J	OX	SOT-363

## Outline Dimensions

unit : mm



## Absolute Maximum Ratings [Tr1, Tr2]

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	40	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	200	mA
Collector power dissipation	$P_C^*$	200	mW
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-55 ~ 150	°C

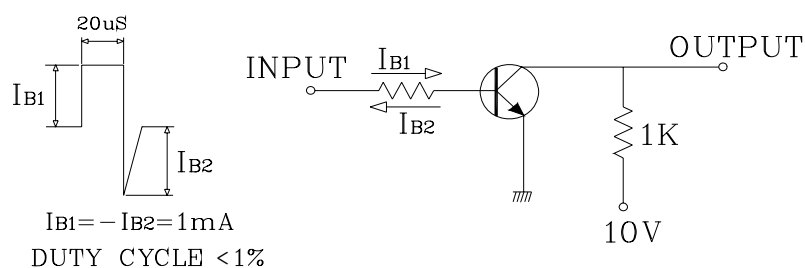
※: Total rating

## Electrical Characteristics [Tr1, Tr2]

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{CBO}$	$I_C=10\mu A, I_E=0$	60	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C=1mA, I_B=0$	40	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E=10\mu A, I_C=0$	6	-	-	V
Collector cut-off current	$I_{CEX}$	$V_{CE}=30V, V_{EB}=3V$	-	-	50	nA
DC current gain	$h_{FE}$	$V_{CE}=1V, I_C=10mA$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$	-	-	0.3	V
Transition frequency	$f_T$	$V_{CE}=20V, I_C=10mA, f=100MHz$	300	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=5V, I_E=0, f=1MHz$	-	-	4	pF
Delay time	$t_d$	$V_{CC}=10V, I_C=10mA, I_{B1}=-I_{B2}=1mA^*$	-	-	35	ns
Rise time	$t_r$		-	-	35	ns
Storage time	$t_{stg}$		-	-	200	ns
Fall Time	$t_f$		-	-	50	ns

※ Switching Time Test Circuit.



## Electrical Characteristic Curves

[Tr1, Tr2]

Fig. 1  $I_C - V_{BE}$

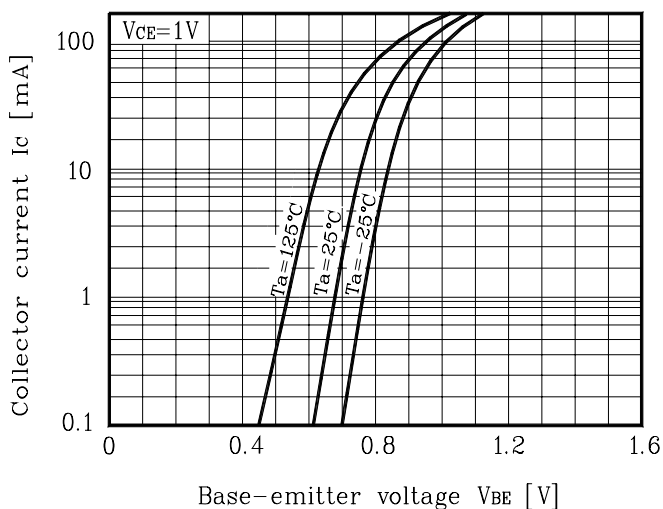


Fig. 3  $h_{FE} - I_C$

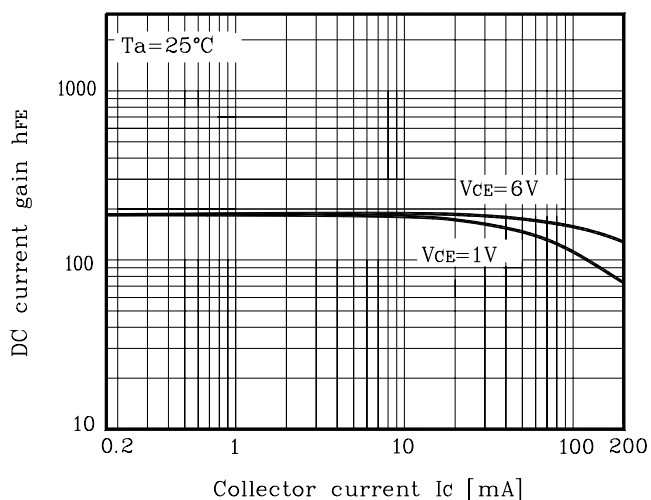


Fig. 2  $I_C - V_{CE}$

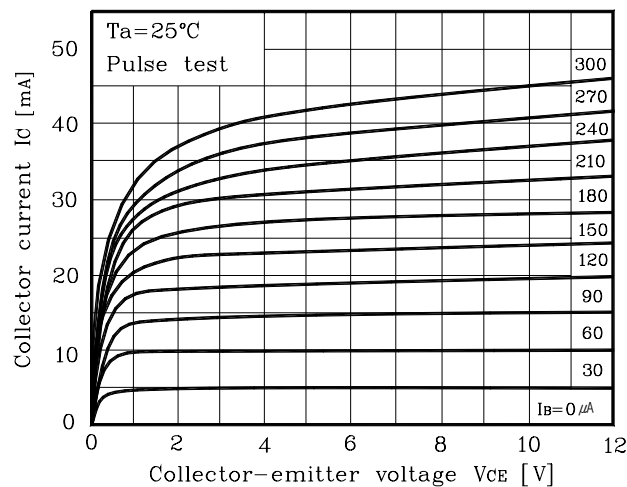
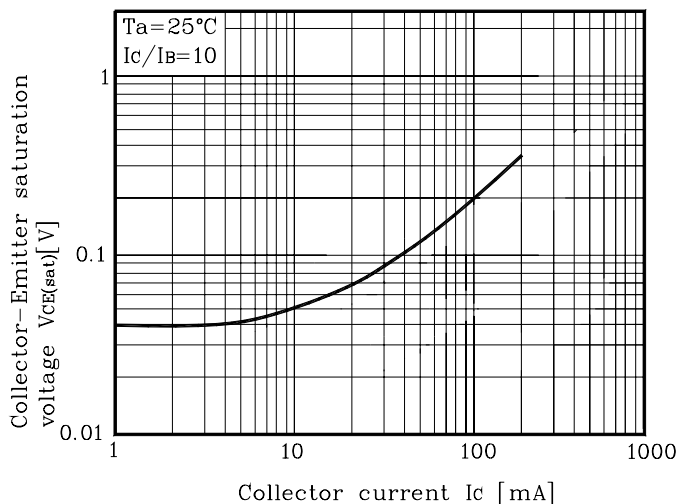


Fig. 4  $V_{CE(SAT)} - I_C$



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