

**2SC5938**FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE

## DESCRIPTION

ISAHAYA 2SC5938 is a super mini package resin sealed silicon NPN epitaxial transistor for muting and switching application

## FEATURE

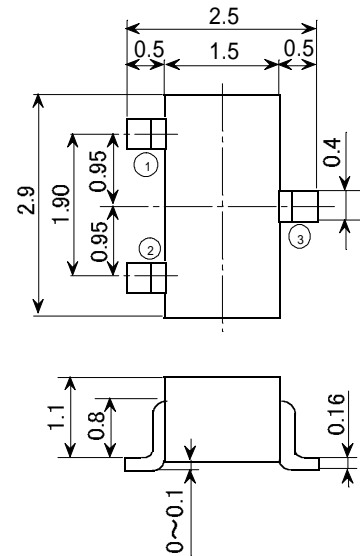
- High Emitter to Base voltage  $V_{EBO}=50V$
- High Reverse  $h_{FE}$
- Low ON RESISTANCE.  $R_{ON}=1$
- Small package for mounting

## APPLICATION

For muting, switching application

## OUTLINE DRAWING

Unit : mm



## TERMINAL CONNECTOR

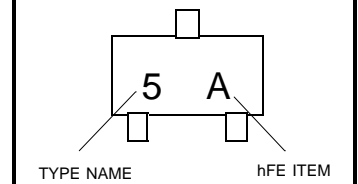
- ① : BASE
- ② : EMITTER
- ③ : COLLECTOR

EIIA:SC-59

MAXIMUM RATINGS ( $T_a=25$  )

Symbol	Parameter	Ratings	Unit
$V_{CBO}$	Collector to Base voltage	50	V
$V_{CEO}$	Collector to Emitter voltage	12	V
$V_{EBO}$	Emitter to Base voltage	50	V
$I_C$	Collector current	200	mA
$P_C$	Collector dissipation	150	mW
$T_j$	Junction temperature	+125	
$T_{stg}$	Storage temprature	-55 ~ +125	

## MARKING

ELECTRICAL CHARACTERISTICS ( $T_a=25$  )

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$I_{CBO}$	Collector cut off current	$V_{CB}=50V, I_E=0mA$			0.1	$\mu A$
$I_{EBO}$	Emitter cut off current	$V_{EB}=50V, I_C=0mA$			0.1	$\mu A$
$h_{FE}$	DC forward current gain	$V_{CE}=2V, I_C=4mA$	200		1200	
$V_{CE(sat)}$	C to E saturation voltage	$I_C=30mA, I_B=3mA$		30		mV
$f_T$	Gain bandwidth product	$V_{CE}=6V, I_C=4mA$		30		MHz
$C_{ob}$	Collector output capacitance	$V_{CB}=10V, I_E=0mA, f=1MHz$		5.0		pF

Item	A	B
$h_{FE}$	200 to 700	350 to 1200
Marking	5A	5B

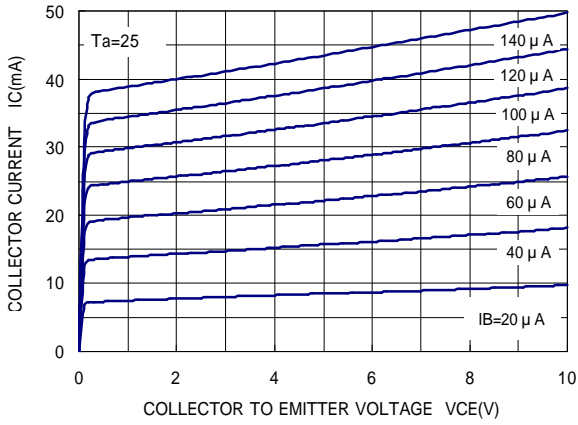
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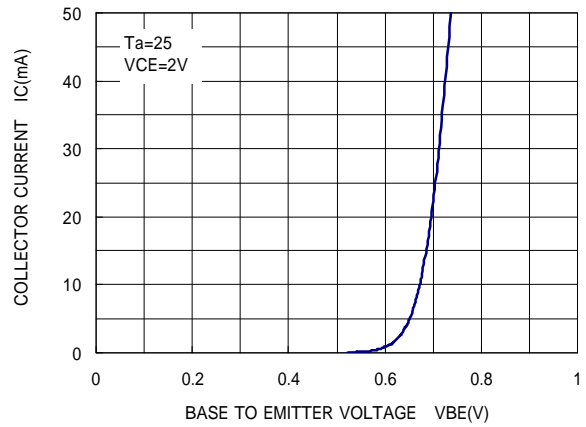
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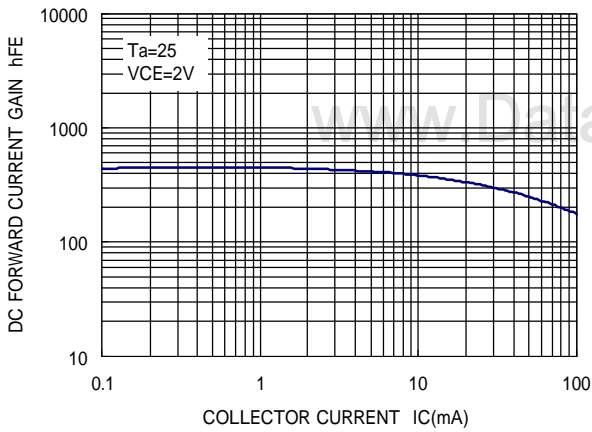
COMMON EMITTER OUTPUT



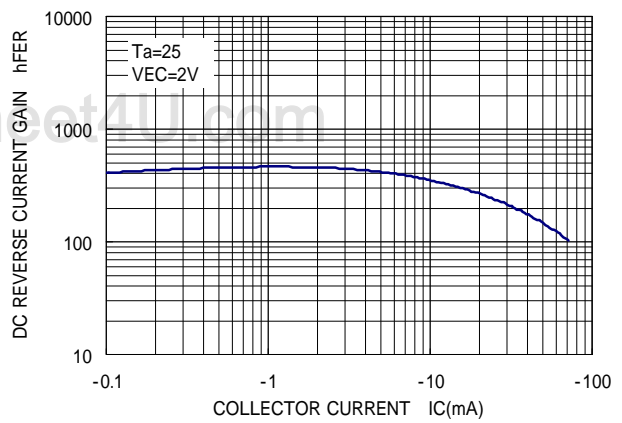
COMMON EMITTER TRANSFER



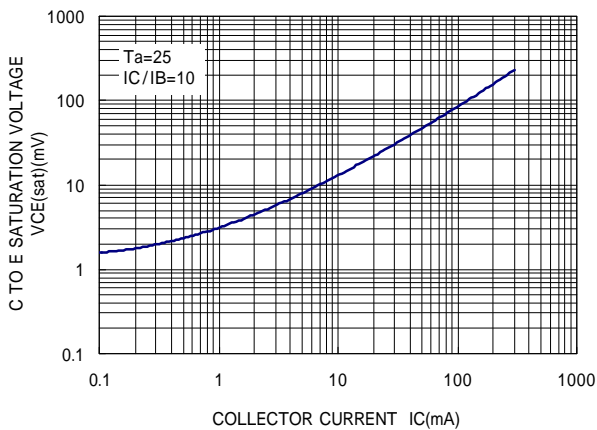
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



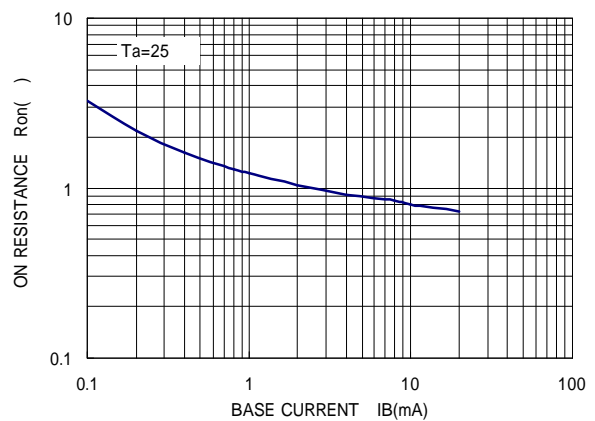
DC REVERSE CURRENT GAIN VS. COLLECTOR CURRENT



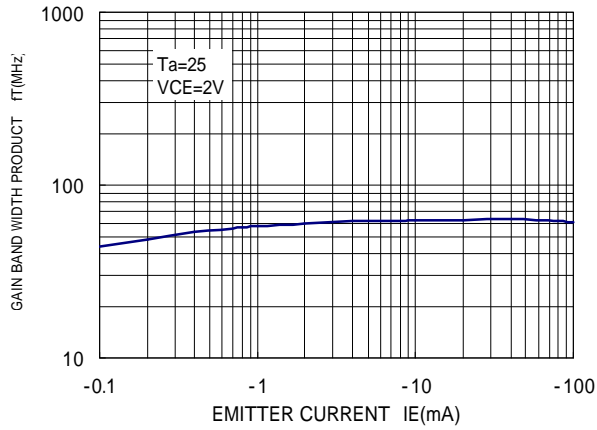
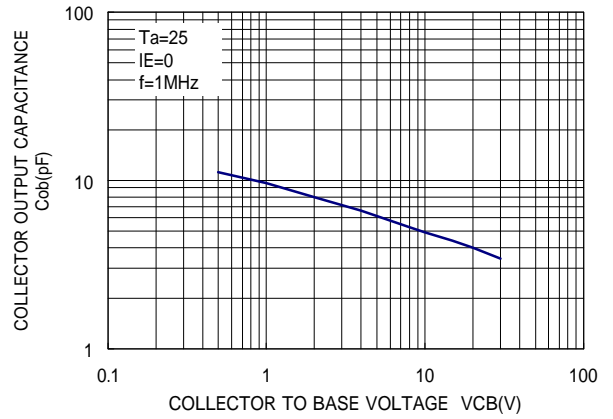
COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



ON RESISTANCE VS. BASE CURRENT



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FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPEGAIN BAND WIDTH PRODUCT VS.  
EMITTER CURRENTCOLLECTOR OUTPUT CAPACITANCE  
VS. COLLECTOR TO BASE VOLTAGE

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