

**2SC5974A**FOR LOW FREQUENCY AMPLIFY APPLICATION  
SILICON NPN EPITAXIAL TYPE**DESCRIPTION**

ISAHAYA 2SC5974A is a mini package resin sealed silicon NPN epitaxial transistor for muting and switching application

**FEATURE**

- High Emitter to Base voltage  $V_{EBO}=40V$
- High Reverse  $h_{FE}$
- Low ON RESISTANCE.  $R_{ON}=1$
- Small package for mounting

**APPLICATION**

For muting, switching application

**MAXIMUM RATINGS (Ta=25 )**

Symbol	Parameter	Ratings	Unit
$V_{CBO}$	Collector to Base voltage	50	V
$V_{CEO}$	Collector to Emitter voltage	20	V
$V_{EBO}$	Emitter to Base voltage	40	V
$I_C$	Collector current	200	mA
$P_C$	Collector dissipation	450	mW
$T_j$	Junction temperature	+125	
$T_{stg}$	Storage temperature	-55 ~ +125	

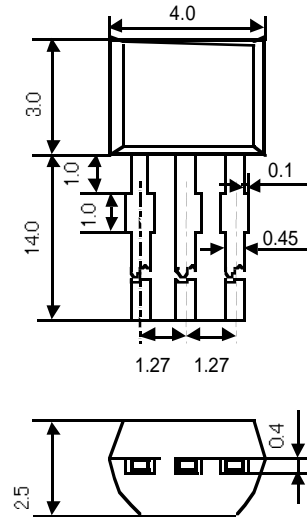
**ELECTRICAL CHARACTERISTICS (Ta=25 )**

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	$V_{EB}=40V, I_C=0mA$			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

**OUTLINE DRAWING**

Unit:mm

**TERMINAL CONNECTOR**

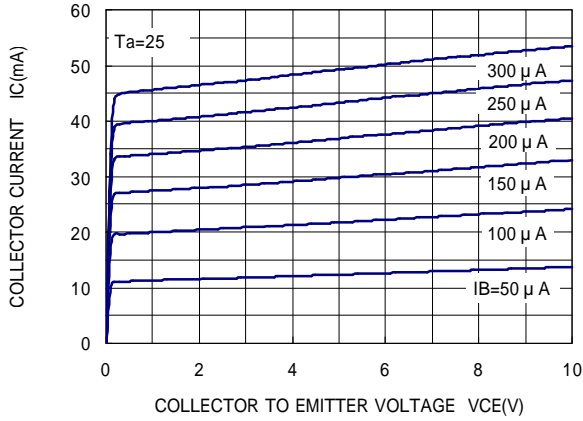
- ① : EMITTER
- ② : COLLECTOR
- ③ : BASE

EIJA: -

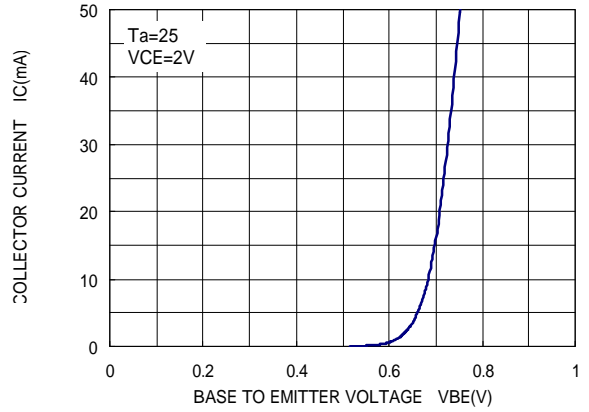
# 2SC5974A

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SILICON NPN EPITAXIAL TYPE

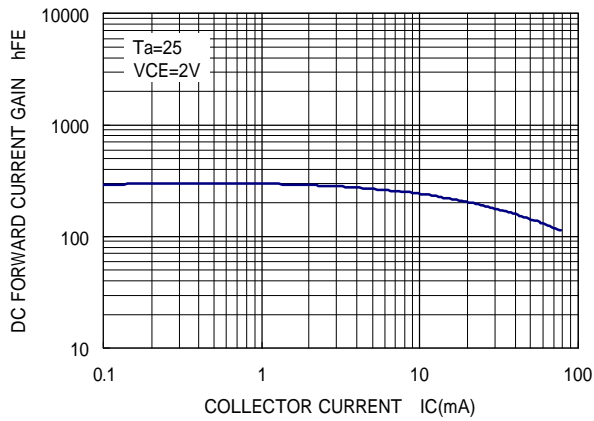
COMMON EMITTER OUTPUT



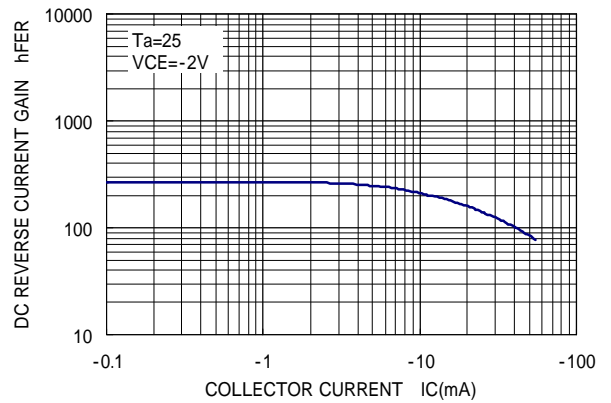
COMMON EMITTER TRANSFER



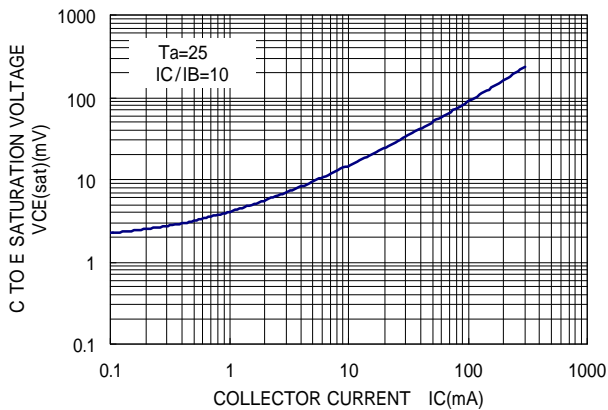
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



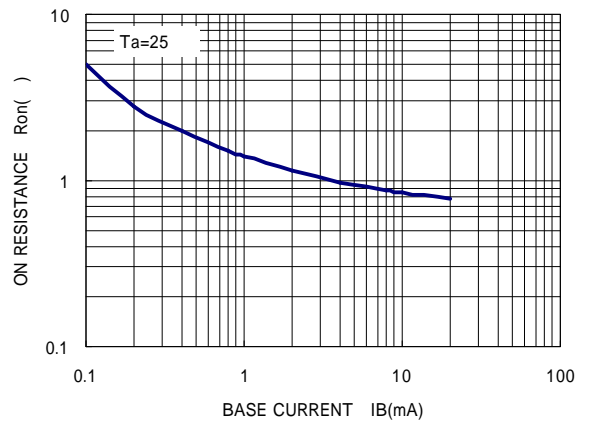
DC REVERSE CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



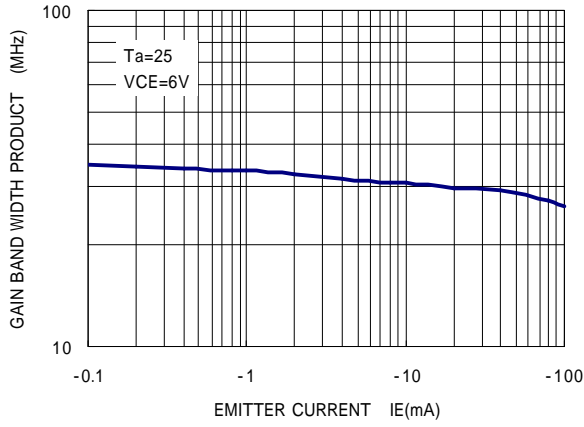
ON RESISTANCE VS. BASE CURRENT



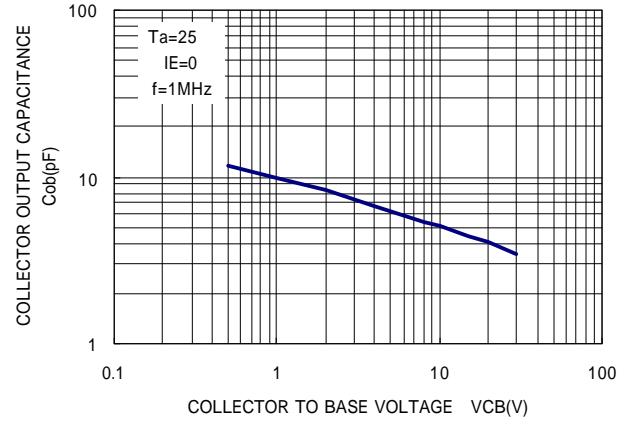
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FOR LOW FREQUENCY AMPLIFY APPLICATION  
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GAIN BAND WIDTH PRODUCT VS.  
EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE  
VS. COLLECTOR TO BASE VOLTAGE





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