

2SC5974B

FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

PRELIMINARY
 Notices: This is not a final specification.
 Some parametric limits are subject to
 change.

DESCRIPTION

ISAHAYA 2SC5974B 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. $R_{ON}=0.75\Omega$
- Small package for mounting

APPLICATION

For muting, switching application

MAXIMUM RATINGS (Ta=25°C)

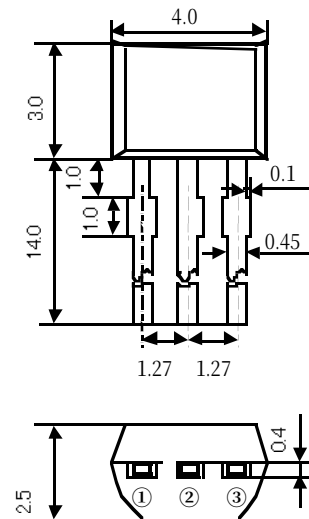
Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	40	V
V_{CEO}	Collector to Emitter voltage	9	V
V_{EBO}	Emitter to Base voltage	40	V
I_C	Collector current	200	mA
P_C	Collector dissipation	450	mW
T_j	Junction temperature	+125	°C
T_{stg}	Storage temprature	-55 ~ +125	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
I_{CBO}	Collector cut off current	$V_{CB}=40V, I_E=0mA$			0.1	μA
I_{EBO}	Emitter cut off current	$V_{EB}=40V, I_C=0mA$			0.1	μA
h_{FE}	DC forward current gain	$V_{CE}=2V, I_C=4mA$	700		2200	
$V_{CE(sat)}$	C to E saturation voltage	$I_C=30mA, I_B=3mA$		25		mV
f_T	Gain bandwidth product	$V_{CE}=6V, I_C=4mA$		150		MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0mA, f=1MHz$		3.0		pF

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

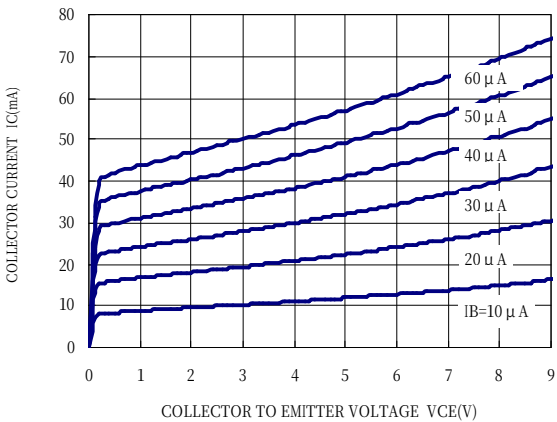
- ① : EMITTER
 ② : COLLECTOR
 ③ : BASE

E1JA: -

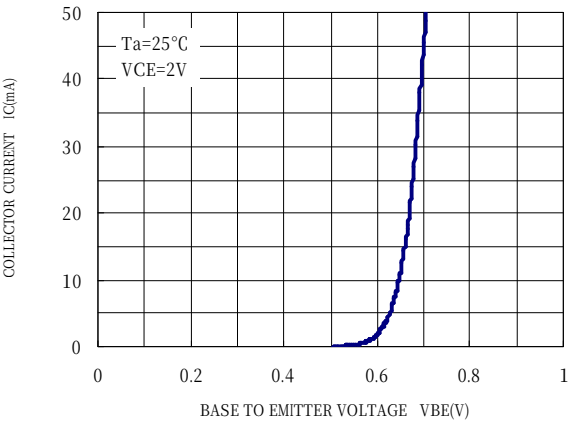
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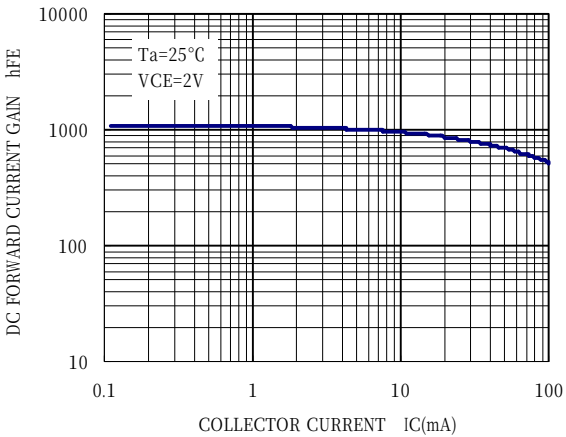
COMMON EMITTER OUTPUT



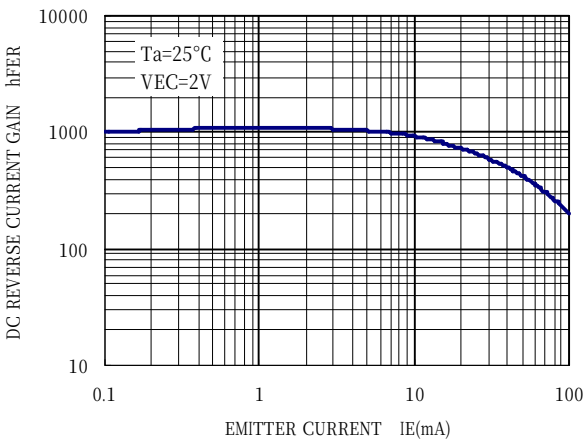
COMMON EMITTER TRANSFER



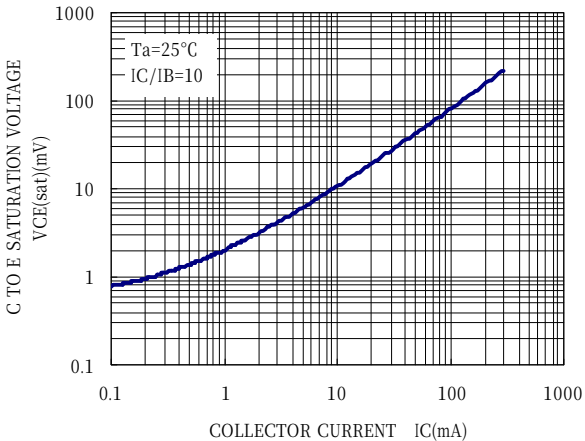
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



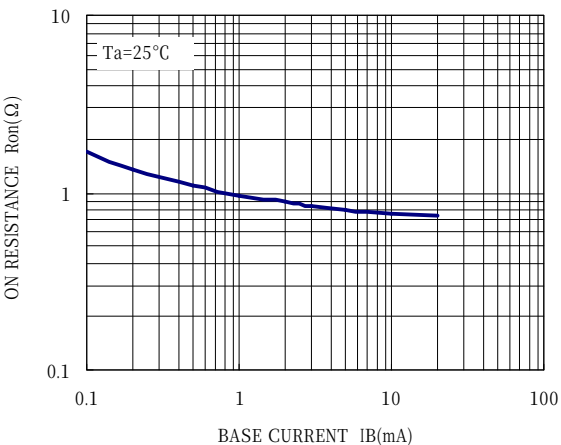
DC REVERSE CURRENT GAIN
VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT



ON RESISTANCE VS. BASE CURRENT

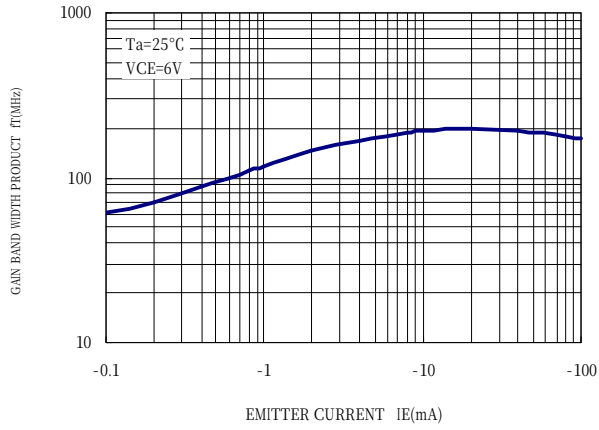


SMALL-SIGNAL TRANSISTOR

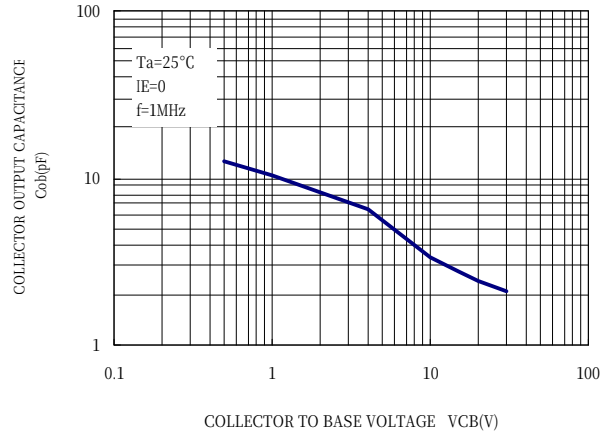
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GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE





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