

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

SMALL-SIGNAL TRANSISTOR

2SC5938B

FOR LOW FREQUENCY AMPLIFY APPLICATION
 SILICON NPN EPITAXIAL TYPE

DESCRIPTION

ISAHAYA 2SC5938B is a super mini package resin sealed silicon NPN epitaxial transistor for muting and switching application

FEATURE

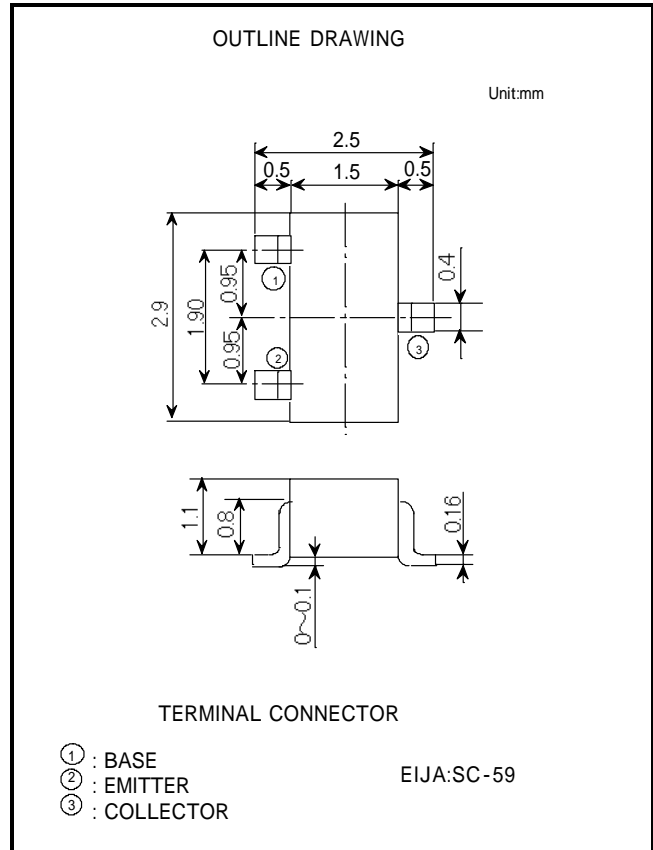
- High Emitter to Base voltage VEBO=40V
- High Reverse hFE
- Low ON RESISTANCE. RON=0.75
- Small package for mounting

APPLICATION

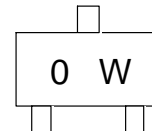
For muting, switching application

MAXIMUM RATINGS (Ta=25 °C)

Symbol	Parameter	Ratings	Unit
V _{CB0}	Collector to Base voltage	40	V
V _{CE0}	Collector to Emitter voltage	9	V
V _{EBO}	Emitter to Base voltage	40	V
I _C	Collector current	200	mA
P _C	Collector dissipation	150	mW
T _j	Junction temperature	+125	
T _{stg}	Storage temperature	-55 ~ +125	



MARKING



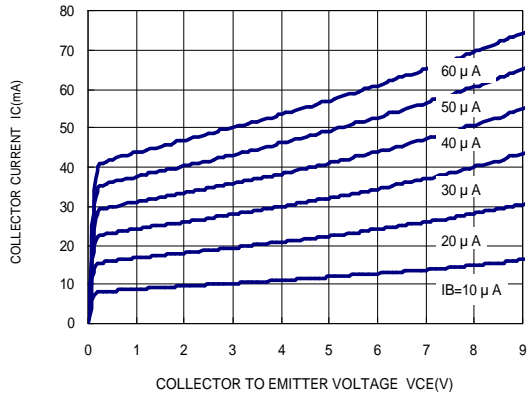
ELECTRICAL CHARACTERISTICS (Ta=25 °C)

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

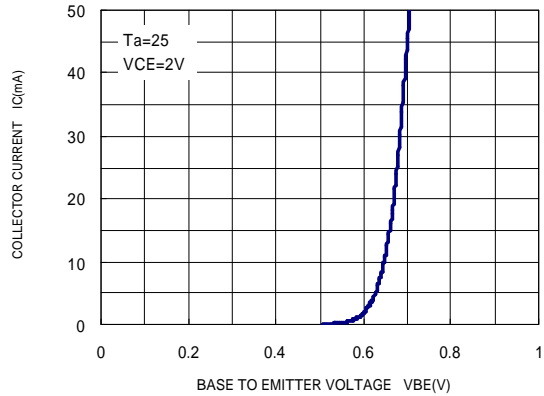
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SILICON NPN EPITAXIAL TYPE

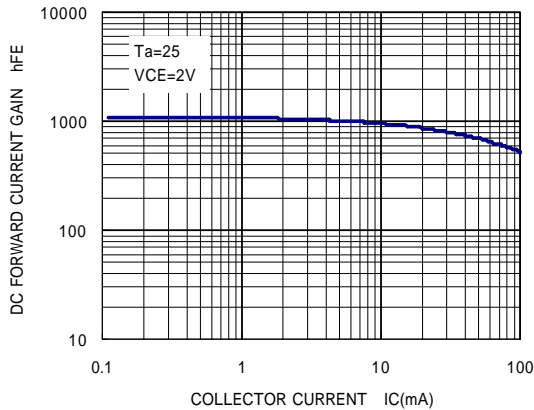
COMMON EMITTER OUTPUT



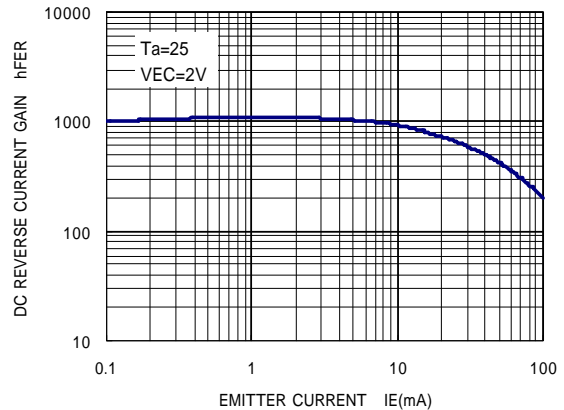
COMMON EMITTER TRANSFER



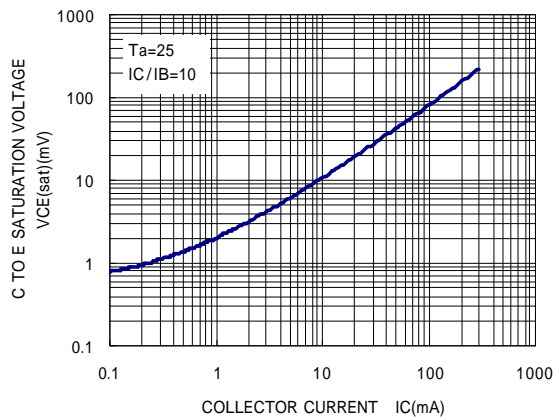
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



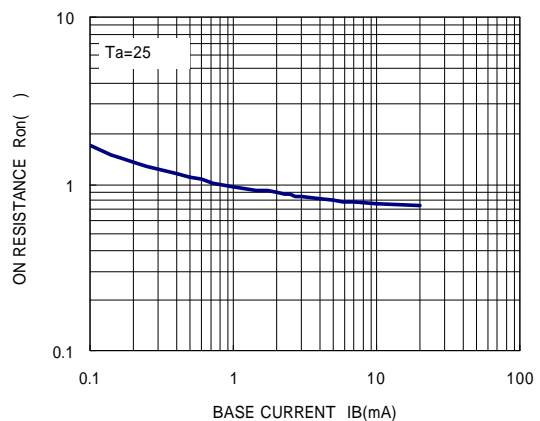
DC REVERSE CURRENT GAIN
VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE
VS. COLLECTOR CURRENT



ON RESISTANCE VS. BASE CURRENT

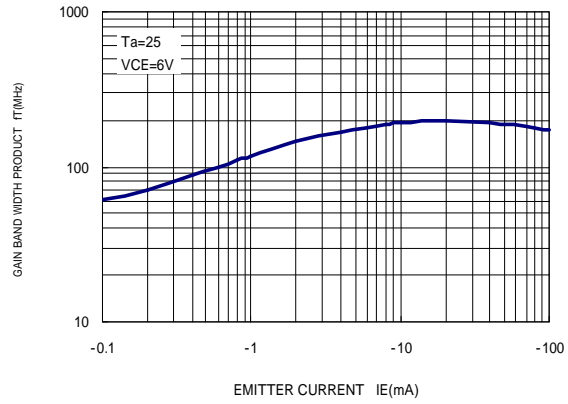


SMALL-SIGNAL TRANSISTOR

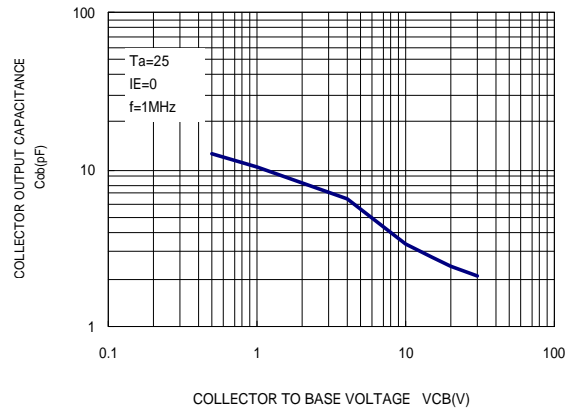
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FOR LOW FREQUENCY AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

GAIN BAND WIDTH PRODUCT VS.
EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE





Marketing division, Marketing planning department

6-41 Tsukuba, Isahaya, Nagasaki, 854-0065 Japan

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