

# RT3C99M

Composite Transistor  
For Muting Application  
Silicon Npn Epitaxial Type

## DESCRIPTION

RT3C99M is a composite transistor built with two 2SC5938A chips in SC-88 package.

## FEATURE

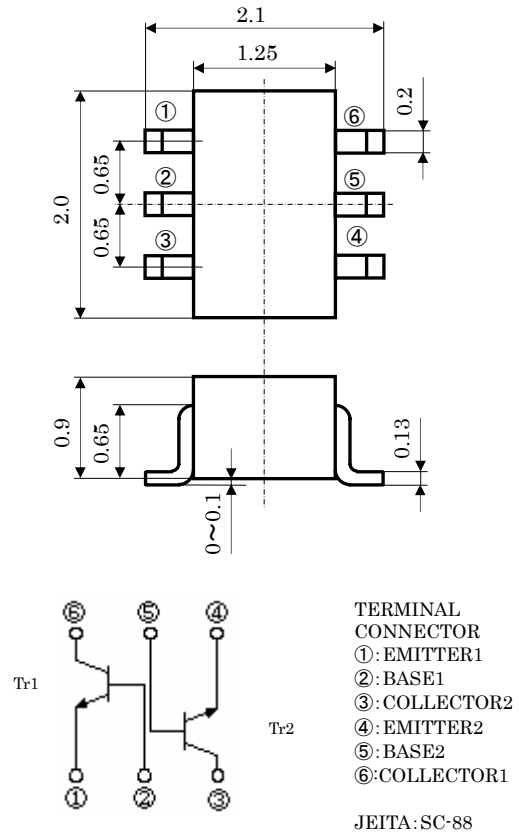
- Silicon NPN epitaxial type
- Each transistor elements are independent.
- Mini package for easy mounting

## APPLICATION

muting circuit, switching circuit

## OUTLINE DRAWING

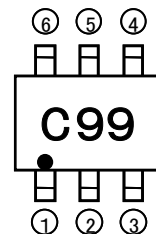
Unit:mm



## MAXIMUM RATING (Ta=25°C)

SYMBOL	PARAMETER	RATING	UNIT
VCBO	Collector to Base voltage	50	V
VEBO	Emitter to Base voltage	40	V
VCEO	Collector to Emitter voltage	20	V
IC	Collector current	200	mA
PC(Total)	Collector dissipation (Ta=25°C)	150	mW
Tj	Junction temperature	+125	°C
Tstg	Storage temperature	-55~+125	°C

## MARKING



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## ELECTRICAL CHARACTERISTICS (Ta=25°C)

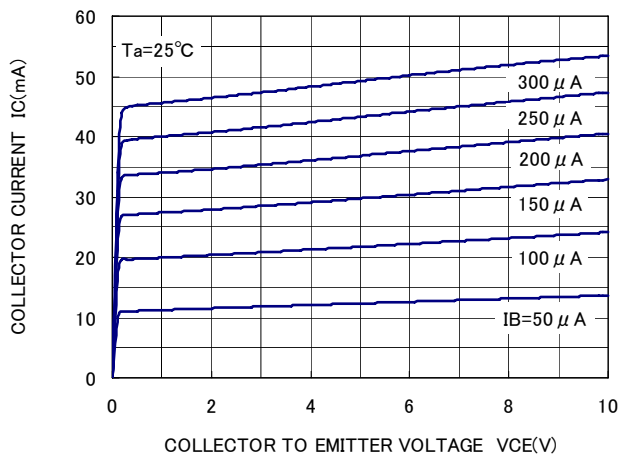
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
ICBO	Collector cut off current	V <sub>CB</sub> =50V, I <sub>E</sub> =0	-	-	0.1	μA
IEBO	Emitter cut off current	V <sub>EB</sub> =40V, I <sub>C</sub> =0	-	-	0.1	μA
hFE*	DC forward current gain	V <sub>CE</sub> =2V, I <sub>C</sub> =4mA	200	-	1200	-
V <sub>CE(sat)</sub>	Collector to Emitter saturation voltage	I <sub>C</sub> =30mA, I <sub>B</sub> =3mA	-	30	-	V
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =6V, I <sub>E</sub> =4mA	-	30	-	MHZ
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHZ	-	5.0	-	pF
R <sub>on</sub>	Output On-resistance	I <sub>B</sub> =5mA, f=1MHZ	-	0.95	-	Ω

\* : It shows hFE classification in right table.

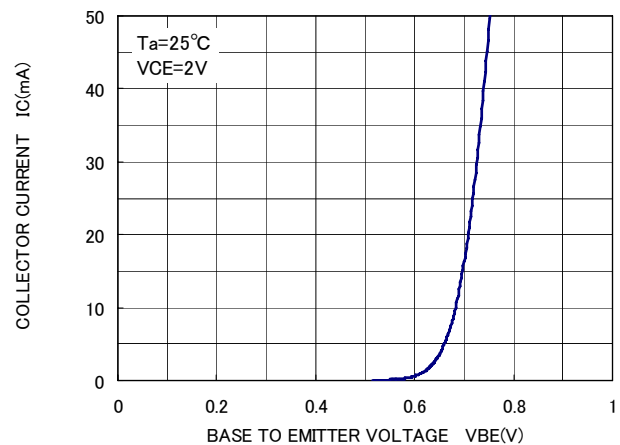
Item	A	B
hFE	200~700	350~1200

## TYPICAL CHARACTERISTICS (Tr1, Tr2)

COMMON EMITTER OUTPUT



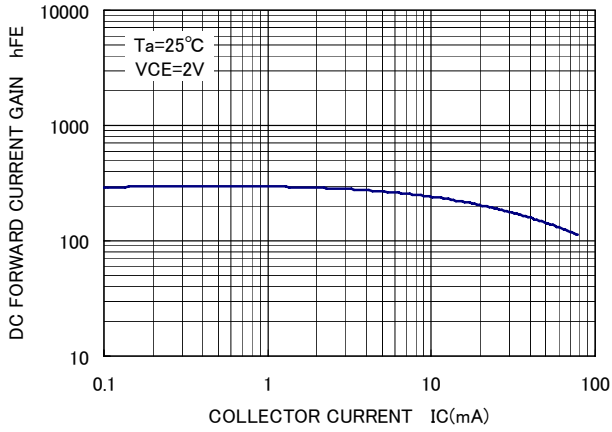
COMMON EMITTER TRANSFER



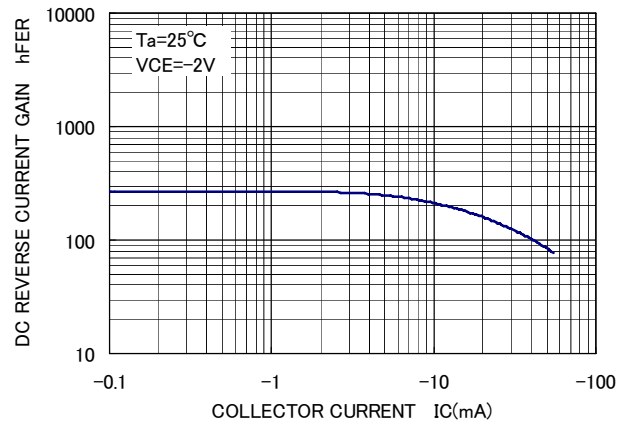
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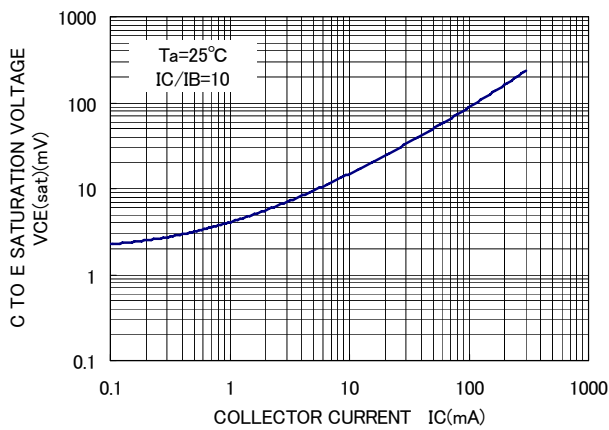
DC FORWARD CURRENT GAIN  
VS. COLLECTOR CURRENT



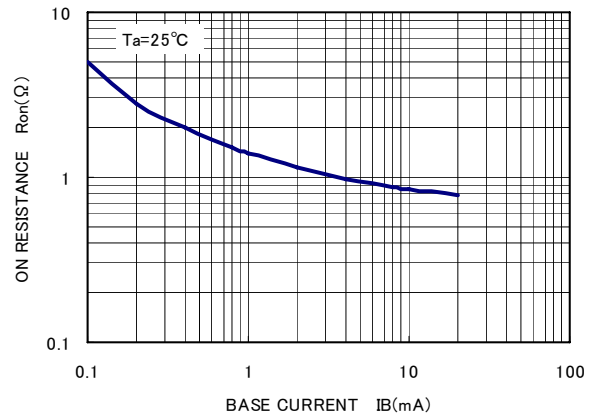
DC REVERSE CURRENT GAIN  
VS. COLLECTOR CURRENT



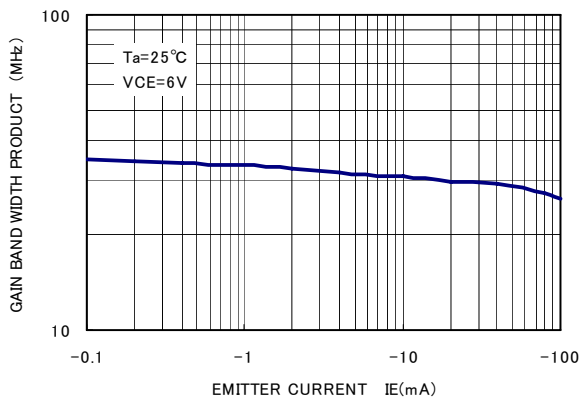
COLLECTOR TO EMITTER SATURATION VOLTAGE  
VS. COLLECTOR CURRENT



ON RESISTANCE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS.  
EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE  
VS. COLLECTOR TO BASE VOLTAGE

