RT3WLMM

Composite Transistor
For Low Frequency Amplify Application
Silicon Epitaxial Type

DESCRIPTION

RT3WLMM is a composite transistor built with 2SC3052 chip and 2SA1235A chip in SC-88 package.

FEATURE

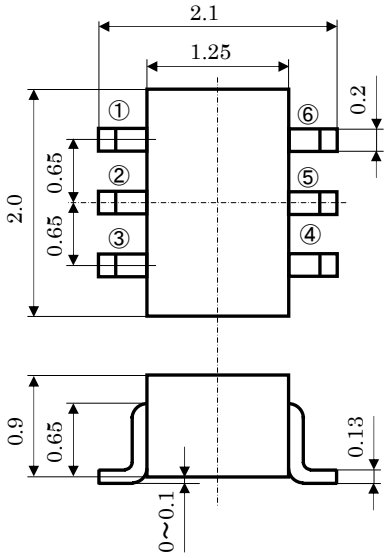
Silicon epitaxial type
Each transistor elements are independent.
Mini package for easy mounting

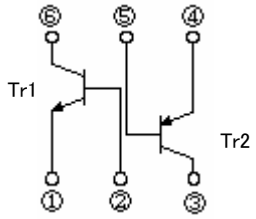
APPLICATION

For low frequency amplify application

OUTLINE DRAWING

Unit:mm





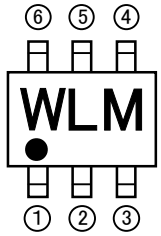
TERMINAL CONNECTOR
①: EMITTER1
②: BASE1
③: COLLECTOR2
④: EMITTER2
⑤: BASE2
⑥: COLLECTOR1

JEITA: SC-88

MAXIMUM RATING (Ta=25℃)

SYMBOL	PARAMETER	RATING		UNIT
		Tr1	Tr2	
V_{CBO}	Collector to Base voltage	50	60	V
V_{EBO}	Emitter to Base voltage	6		V
V_{CEO}	Collector to Emitter voltage	50		V
I_C	Collector current	200		mA
$P_{C(Total)}$	Collector dissipation (Ta=25℃)	150		mW
T_j	Junction temperature	+125		℃
T_{stg}	Storage temperature	-55～+125		℃

MARKING



ELECTRICAL CHARACTERISTICS (Ta=25℃)

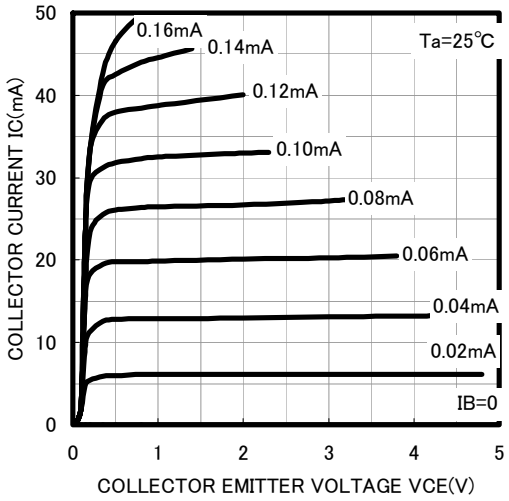
Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
$V_{(BR)CEO}$	Collector to Emitter break down voltage	I_C=100μA,R_{BE}=∞	50	-	-	V
I_{CBO}	Collector cut off current	V_{CB}=50V,I_E=0	-	-	0.1	μA
I_{EBO}	Emitter cut off current	V_{EB}=6V,I_C=0	-	-	0.1	μA
h_{FE}*	DC forward current gain	V_{CE}=6V,I_C=1mA	150	-	500	-
h_{FE}	DC forward current gain	V_{CE}=6V,I_C=0.1mA	90	-	-	-
$V_{CE(sat)}$	Collector to Emitter saturation voltage	I_C=100mA,I_B=10mA	-	-	0.3	V
f_T	Gain band width product	V_{CE}=6V,I_E=-10mA	-	200	-	MHz
C_{ob}	Collector output capacitance	(Tr1) V_{CB}=6V,I_E=0,f=1MHz		2.5		pF
		(Tr2) V_{CB}=-6V,I_E=0,f=1MHz		4.0		
NF	Noise figure	(Tr1) V_{CE}=6V,I_E=-0.1mA,f=1kHz,R_G=2kΩ	-	-	15	dB
		(Tr2) V_{CE}=-6V,I_E=0.3mA,f=100Hz,R_G=10kΩ	-	-	20	

＊: It shows hFE classification in right table.

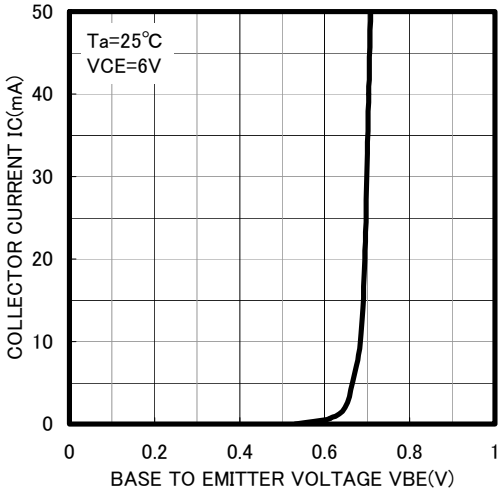
Item	E	F
hFE	150～300	250～500

TYPICAL CHARACTERISTICS (Tr1)

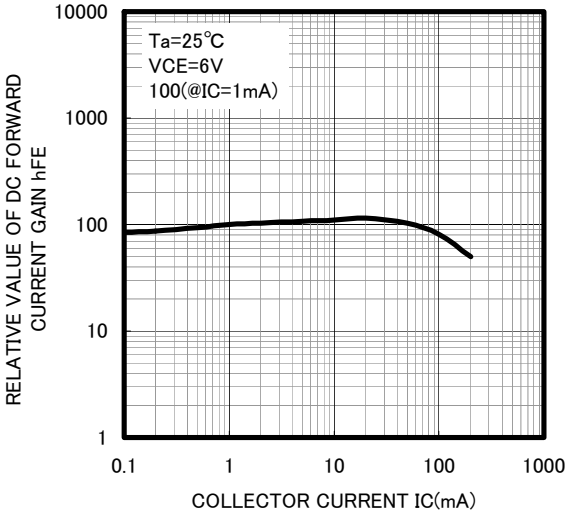
COMMON EMITTER OUTPUT



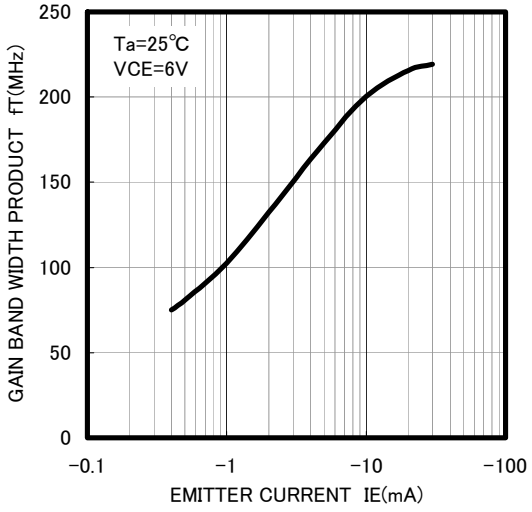
COMMON EMITTER TRANSFER



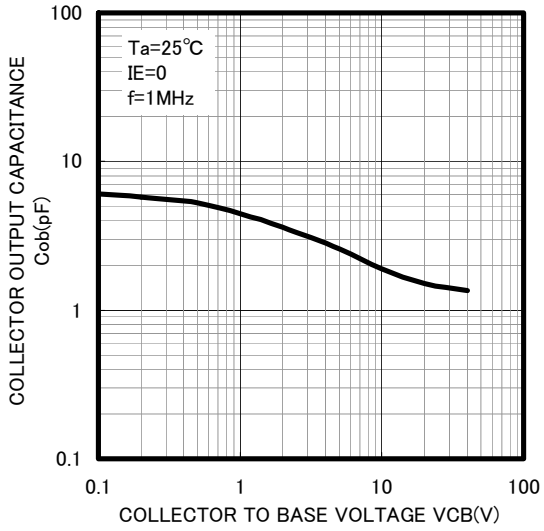
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT

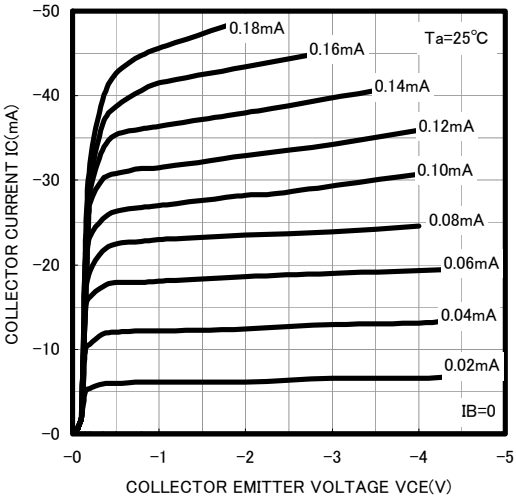


COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE

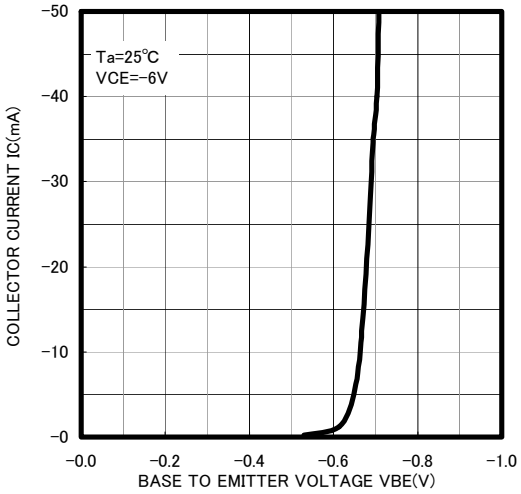


TYPICAL CHARACTERISTICS (Tr2)

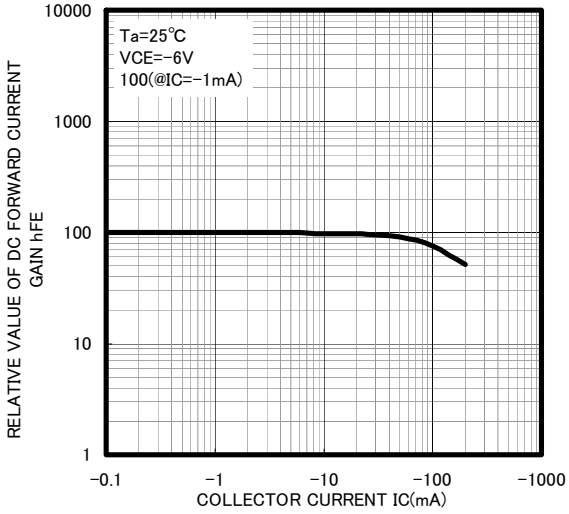
COMMON EMITTER OUTPUT



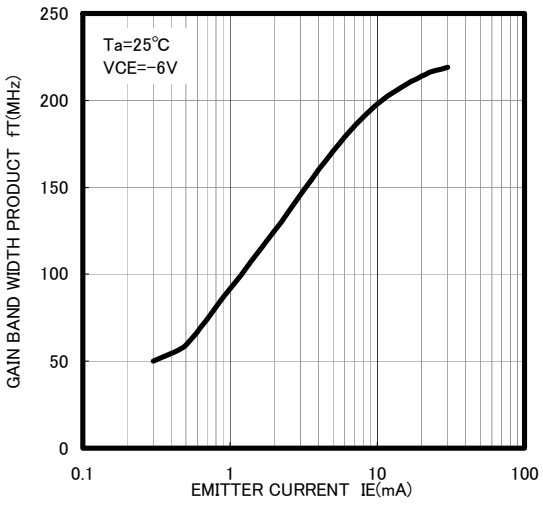
COMMON EMITTER TRANSFER



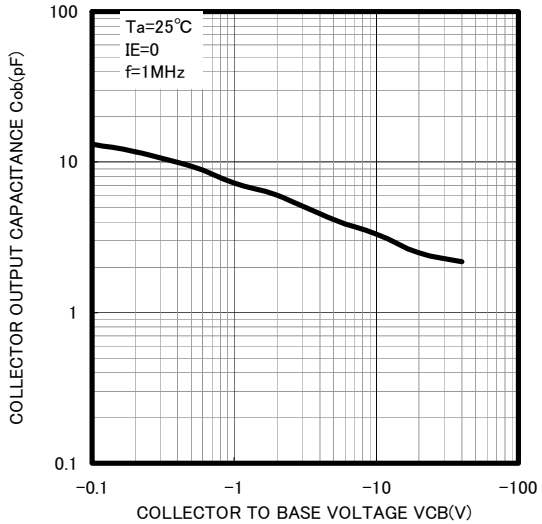
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE



ISAHAYA ELECTRONICS CORPORATION

Marketing division, Marketing planning department

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

Keep safety first in your circuit designs!

·ISAHAYA Electronics Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (1) placement of substitutive, auxiliary, (2) use of non-farmable material or (3) prevention against any malfunction or mishap.

Notes regarding these materials

·These materials are intended as a reference to our customers in the selection of the ISAHAYA products best suited to the customer's application; they don't convey any license under any intellectual property rights, or any other rights, belonging ISAHAYA or third party.

·ISAHAYA Electronics Corporation assumes no responsibility for any damage, or infringement of any third party's rights, originating in the use of any product data, diagrams, charts or circuit application examples contained in these materials.

·All information contained in these materials, including product data, diagrams and charts, represent information on products at the time of publication of these materials, and are subject to change by ISAHAYA Electronics Corporation without notice due to product improvements or other reasons. It is therefore recommended that customers contact ISAHAYA Electronics Corporation or an authorized ISAHAYA products distributor for the latest product information before purchasing product listed herein.

·ISAHAYA Electronics Corporation products are not designed or manufactured for use in a device or system that is used under circumstances in which human life is potentially at stake. Please contact ISAHAYA electronics corporation or an authorized ISAHAYA products distributor when considering the use of a product contained herein for any specific purposes, such as apparatus or systems for transportation, vehicular, medical, aerospace, nuclear, or undersea repeater use.

·The prior written approval of ISAHAYA Electronics Corporation is necessary to reprint or reproduce in whole or in part these materials.

·If these products or technologies are subject to the Japanese export control restrictions, they must be exported under a license from the Japanese government and cannot be imported into a country other than the approved destination. Any diversion or re-export contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited.

·Please contact ISAHAYA Electronics Corporation or authorized ISAHAYA products distributor for further details on these materials or the products contained therein.

Jan.2003