〈SMALL-SIGNAL TRANSISTOR〉

2SC3242,2SC3242A

FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC3242,2SC3242A is a silicon NPN epitaxial type transistor designed for small type motor drive, solenoid drive and power supply application.

Complementary with 2SA1282,2SA1282A.

FEATURE

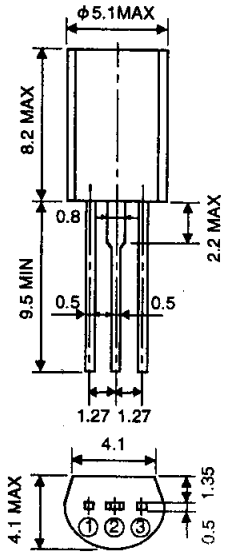
- High collector current Ic=2A
- Low $V_{CE(sat)}$
  $V_{CE(sat)}$=0.17V typ (@Ic=1A)
- High h_{FE} h_{FE}=150 to 800
- High collector dissipation Pc=900mW

APPLICATION

Small type motor drive, power supply for VCR, deck, player.

OUTLINE DRAWING

Unit:mm



TERMINAL CONNECTOR

①: EMITTER
②: COLLECTOR EIAJ: —
③: BASE JEDEC: —

Note)
The dimension without tolerance represent central value.

MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings		Unit
		2SC3242	2SC3242A	
V_{CBO}	Collector to Base voltage	20	20	V
V_{EBO}	Emitter to Base voltage	6	6	V
V_{CEO}	Collector to Emitter voltage	16	20	V
I_{CM}	Peak Collector current	3		A
Ic	Collector current	2		A
Pc	Collector dissipation(Ta=25℃)	900		mW
T_j	Junction temperature	+150		℃
T_{stg}	Storage temperature	-55 to +150		℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

Symbol	Parameter	Test conditions	Limits						Unit
			2SC3242			2SC3242A			
			Min	Typ	Max	Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	I_C=10μA,I_E=0	20			20			V
$V_{(BR)EBO}$	E to B break down voltage	I_E=10μA,I_C=0	6			6			V
$V_{(BR)CEO}$	C to E break down voltage	I_C=2mA,R_{BE}=∞	16			20			V
I_{CBO}	Collector cut off current	V_{CB}=16V,I_E=0			0.2			0.2	μA
I_{EBO}	Emitter cut off current	V_{EB}=4V,I_C=0			0.2			0.2	μA
h_{FE} *	DC forward current gain	V_{CE}=4V,I_C=100mA	150		800	150		500	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=1A,I_B=50mA		0.17	0.3		0.17	0.3	V
f_T	Gain band width product	V_{CE}=2V,I_E=-10mA		80			80		MHz
Cob	Collector output capacitance	V_{CB}=10V,I_E=0,f=1MHz		28			28		pF

* : It shows h_{FE} classification in right table

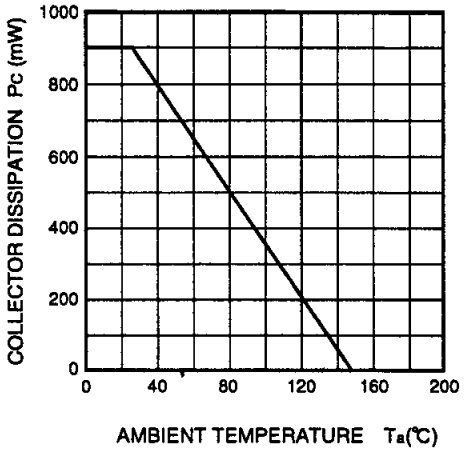
Item	E	F	G
h_{FE}	150 to 300	250 to 500	400 to 800

2SC3242,2SC3242A

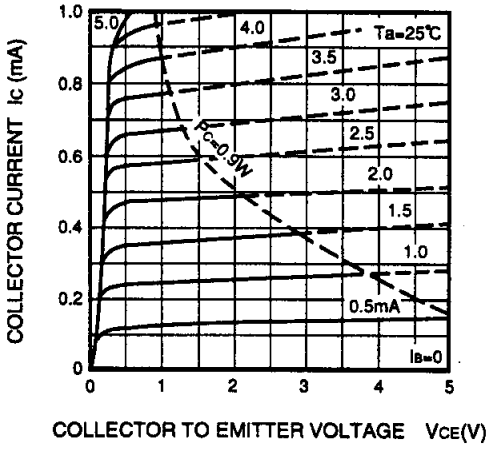
FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

TYPICAL CHARACTERISTICS

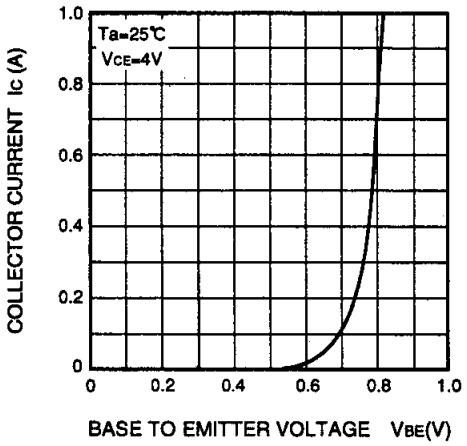
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



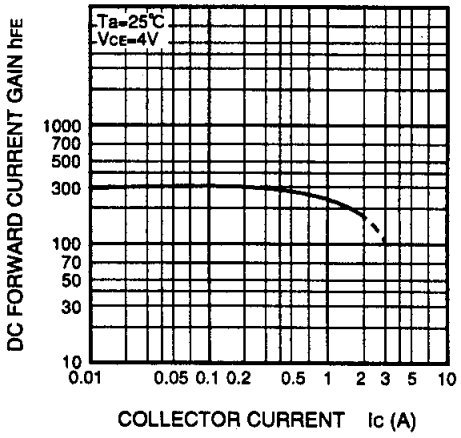
COMMON EMITTER OUTPUT



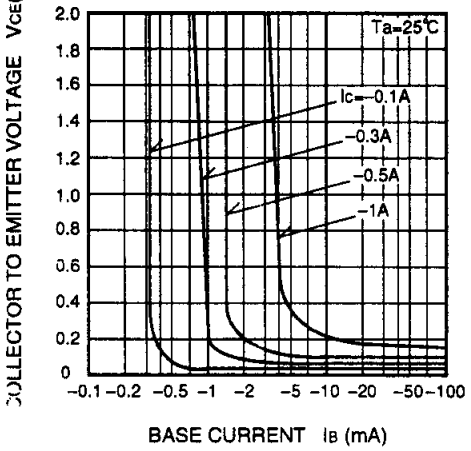
COMMON EMITTER TRANSFER



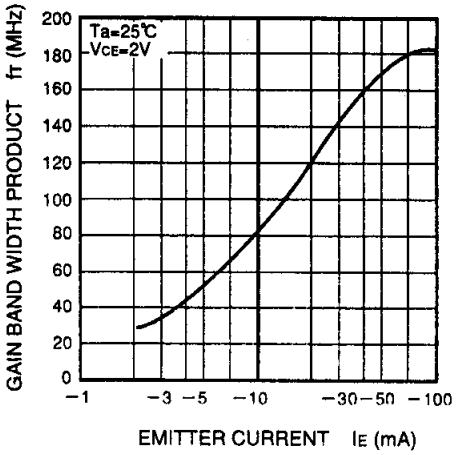
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT

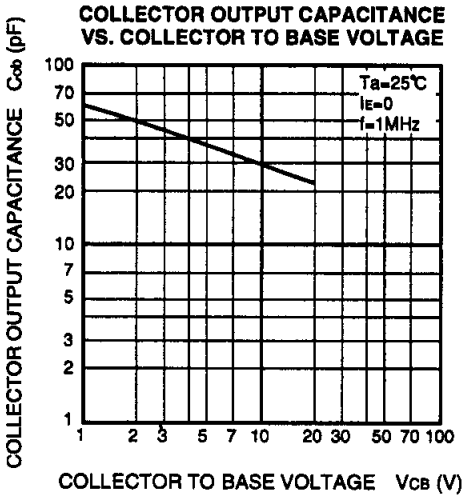


GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



2SC3242,2SC3242A

FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE



ISAHAYA ELECTRONICS CORPORATION

http://www.idc-com.co.jp
6-41, TSUKUBA, ISAHAYA, NAGASAKI, 854-0065, JAPAN

Keep safety 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 consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of non-flammable material or (iii) prevention against any malfunction or mishap.

Notes regarding these materials

·These materials are intended as reference to assist out customers in the selection of the Isahaya semiconductor product best suited to the customer's application, they do not convey any license under any intellectual property rights, or any other rights, belonging to Isahaya Electronics Corporation or a third party.
·Isahaya Electronics Corporation assumes no responsibility for any damage, or infringement of any third-party rights, originating in the use of any product data, diagrams,charts or circuit application examples contained in the 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 authorized Isahaya Semiconductor product distributor for the latest product information before purchasing a product listed herein.
·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 reexport contrary to the export control laws and regulations of Japan and/or the country of destination is prohibited.
·Please contact Isahaya Electronics Corporation or an authorized Isahaya Semiconductor product distributor for further details on these materials or the products contained therein.