

(SMALL-SIGNAL TRANSISTOR)

**2SC3246**

FOR SMALL TYPE MOTOR, PLUNGER DRIVE APPLICATION  
SILICON NPN EPITAXIAL TYPE

**DESCRIPTION**

2SC3246 is a silicon NPN epitaxial type transistor. Designed with high collector current and high hFE.

Complementary with 2SA1286.

**FEATURE**

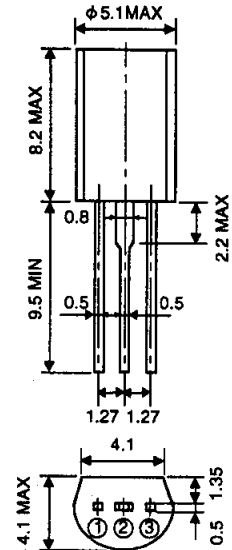
- High hFE hFE=400 to 3000
- High collector current (IC=1.5A, ICM=3A)
- Low collector to emitter saturation voltage  
VCE(sat)=0.2V typ (@IC=1A, IB=20mA)
- High collector dissipation PC=900mW

**APPLICATION**

VCR, tape-deck small type motor drive of player, plunger, drive of relay, power supply of ripple filter.

**OUTLINE DRAWING**

Unit:mm



**TERMINAL CONNECTOR**

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

Note)

The dimension without tolerance represent central value.

**MAXIMUM RATINGS (Ta=25°C)**

Symbol	Parameter	Rated	Unit
V <sub>CB0</sub>	Collector to Base voltage	30	V
V <sub>EB0</sub>	Emitter to Base voltage	6	V
V <sub>CE0</sub>	Collector to Emitter voltage	25	V
I <sub>CM</sub>	Peak Collector current	3	A
I <sub>C</sub>	Collector current	1.5	A
P <sub>C</sub>	Collector dissipation(Ta=25°C)	900	mW
T <sub>j</sub>	Junction temperature	+150	°C
T <sub>stg</sub>	Storage temperature	-55 to +150	°C

**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V <sub>(BR)CB0</sub>	C to B break down voltage	I <sub>C</sub> =10 μA, I <sub>E</sub> =0	30			V
V <sub>(BR)EB0</sub>	E to B break down voltage	I <sub>E</sub> =10 μA, I <sub>C</sub> =0	6			V
V <sub>(BR)CE0</sub>	C to E break down voltage	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	25			V
I <sub>CB0</sub>	Collector cut off current	V <sub>CB</sub> =20V, I <sub>E</sub> =0			0.1	μA
I <sub>EB0</sub>	Emitter cut off current	V <sub>EB</sub> =2V, I <sub>C</sub> =0			0.1	μA
h <sub>FE</sub> *	DC forward current gain	V <sub>CE</sub> =6V, I <sub>C</sub> =500mA	400		3000	—
V <sub>CE(sat)</sub>	C to E saturation voltage	I <sub>C</sub> =1A, I <sub>B</sub> =20mA		0.2	0.5	V
f <sub>T</sub>	Gain band width product	V <sub>CE</sub> =10V, I <sub>E</sub> =-10mA		130		MHz
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		17		pF

\* : It shows hFE classification in right table.

Item	G	H	J	K
hFE	400 to 800	600 to 1200	900 to 1800	1500 to 3000

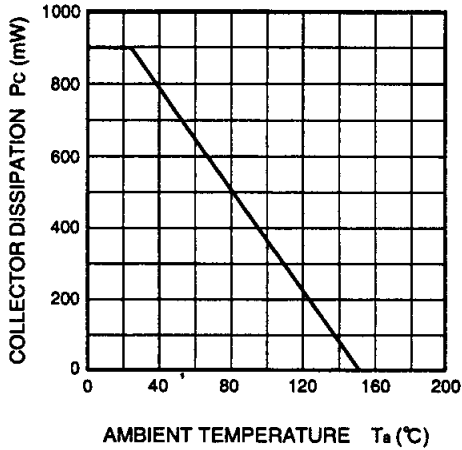
<SMALL-SIGNAL TRANSISTOR>

**2SC3246**

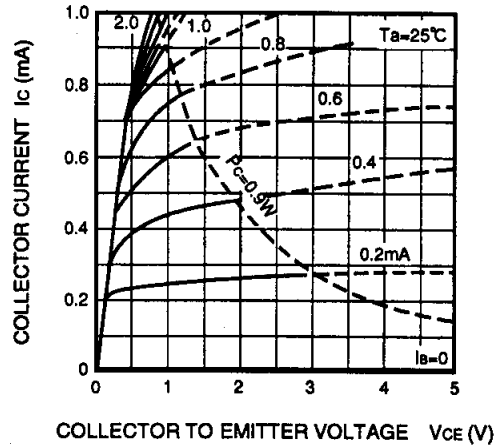
FOR SMALL TYPE MOTOR, PLUNGER DRIVE APPLICATION  
SILICON NPN EPITAXIAL TYPE

**TYPICAL CHARACTERISTICS**

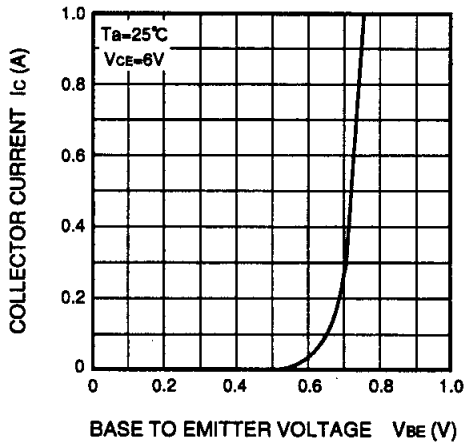
**COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE**



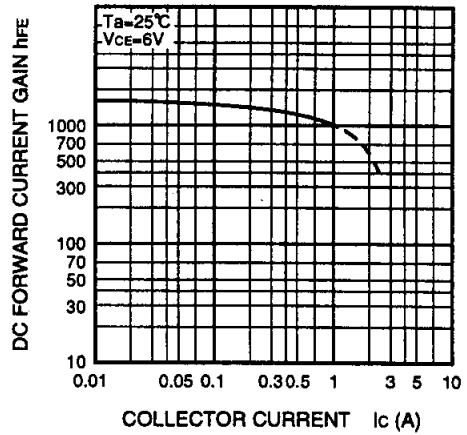
**COMMON EMITTER OUTPUT**



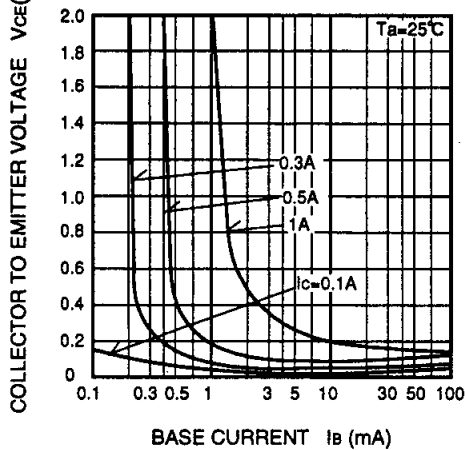
**COMMON EMITTER TRANSFER**



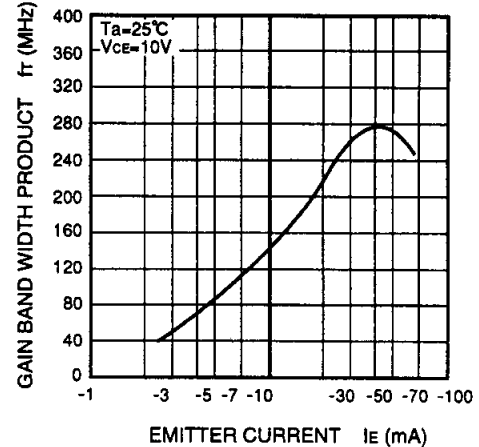
**DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT**



**COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT**



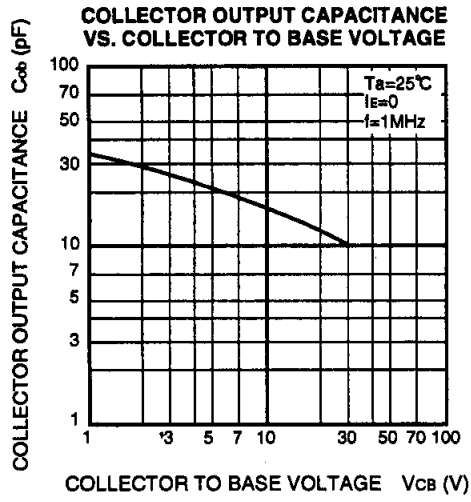
**GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT**



(SMALL-SIGNAL TRANSISTOR)

**2SC3246**

FOR SMALL TYPE MOTOR, PLUNGER DRIVE 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.