〈SMALL-SIGNAL TRANSISTOR〉

2SC3243

FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC3243 is a silicon NPN epitaxial type transistor designed for relay drive or power supply application.

Complementary with 2SA1283.

FEATURE

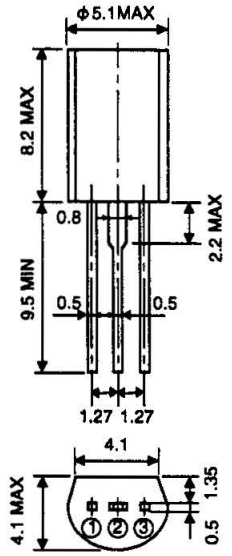
- High voltage V_{CEO}=60V
- High collector current I_C=1A
- Low $V_{CE(sat)}$
  $V_{CE(sat)}$=0.11V typ (@I_C=500mA,I_B=25mA)
- High collector dissipation P_C=900mW

APPLICATION

Relay drive, power supply for audio equipment, VCR.

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
V_{CBO}	Collector to Base voltage	60	V
V_{EBO}	Emitter to Base voltage	6	V
V_{CEO}	Collector to Emitter voltage	60	V
I_{CM}	Peak Collector current	2	A
I_C	Collector current	1	A
P_C	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
			Min	Typ	Max	
$V_{(BR)CBO}$	C to B break down voltage	I_C=10μA,I_E=0	60			V
$V_{(BR)EBO}$	E to B break down voltage	I_E=10μA,I_C=0	6			V
$V_{(BR)CEO}$	C to E break down voltage	I_C=2mA,R_{BE}=∞	60			V
I_{CBO}	Collector cut off current	V_{CB}=50V,I_E=0			0.2	μA
I_{EBO}	Emitter cut off current	V_{EB}=4V,I_C=0			0.2	μA
h_{FE} *	DC forward current gain	V_{CE}=4V,I_C=100mA	55		300	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=500mA,I_B=25mA		0.11	0.3	V
f_T	Gain band width product	V_{CE}=2V,I_E=-10mA		120		MHz
C_{ob}	Collector output capacitance	V_{CB}=10V,I_E=0,f=1MHz		14		pF

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

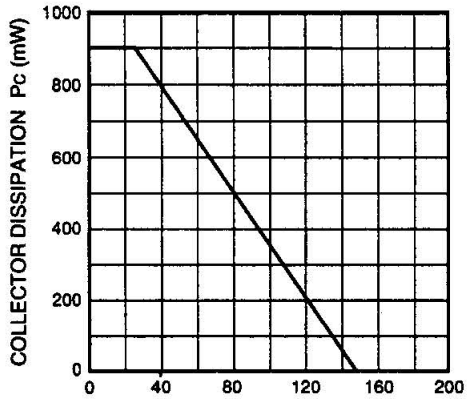
Item	C	D	E
h_{FE}	55 to 110	90 to 180	150 to 300

2SC3243

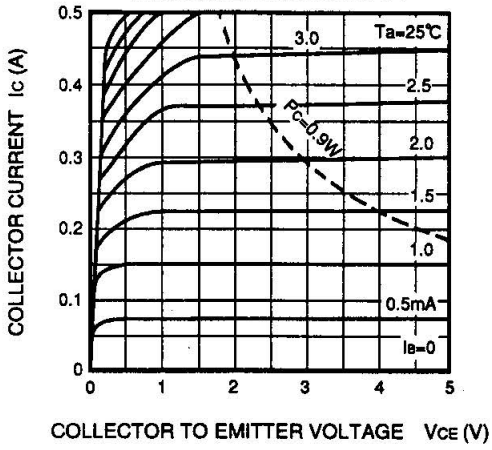
FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

TYPICAL CHARACTERISTICS

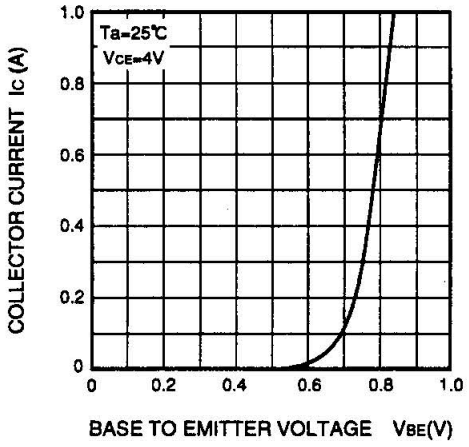
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



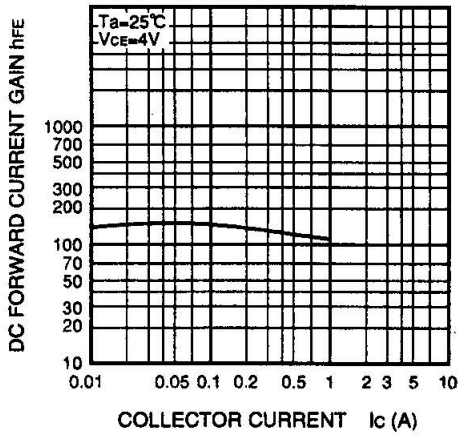
COMMON EMITTER OUTPUT



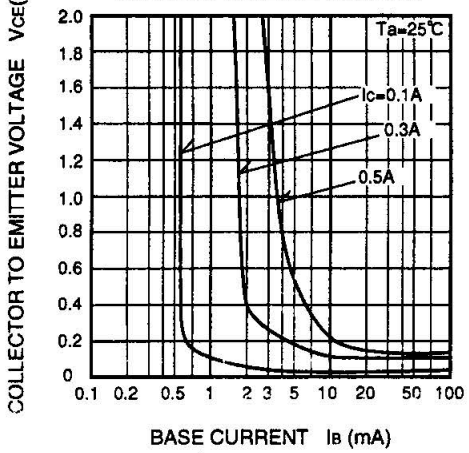
COMMON EMITTER TRANSFER



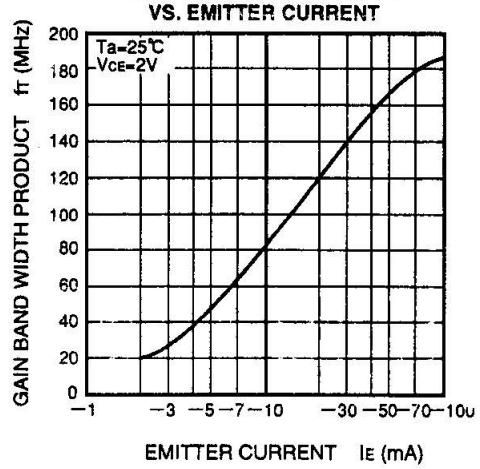
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



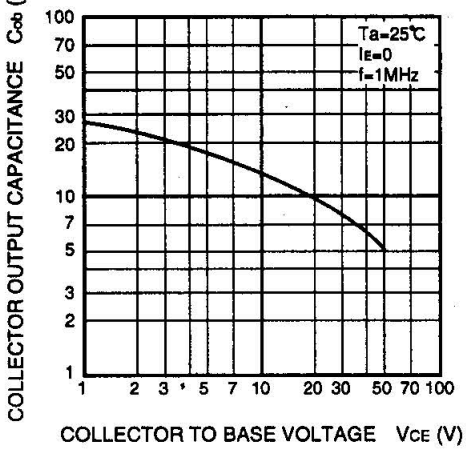
GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



2SC3243

FOR LOW FREQUENCY POWER AMPLIFY APPLICATION
SILICON NPN EPITAXIAL TYPE

COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



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.