〈SMALL-SIGNAL TRANSISTOR〉

2SC5212

FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

DESCRIPTION

2SC5212 is a resin sealed silicon NPN epitaxial type transistor. It designed with high collector current and small $V_{CE(sat)}$.

Complementary with 2SA1946.

FEATURE

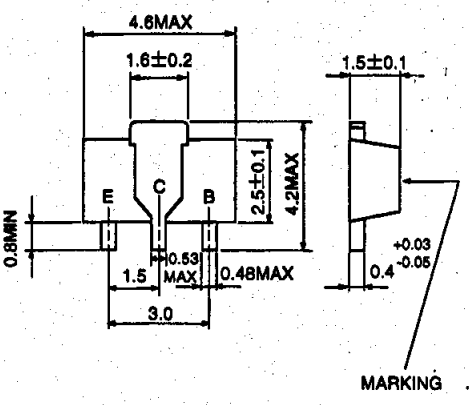
- Low collector saturation voltage
  $V_{CE(sat)}$=0.2V typ
- High f_T f_T=180MHz typ
- Excellent linearity of DC forward current gain
- High collector current I_{CM}=1A
- Small package for mounting

APPLICATION

For relay drive, small motor drive, power supply application.

OUTLINE DRAWING

Unit:mm



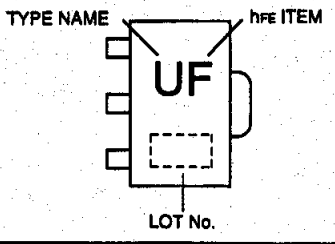
TERMINAL CONNECTOR

E : EMITTER
C : COLLECTOR
B : BASE

EIAJ : SC-62
JEDEC : –

Note)
The dimension without tolerance represent central value.

MARKING



MAXIMUM RATINGS (Ta=25℃)

Symbol	Parameter	Ratings	Unit
V_{CBO}	Collector to Base voltage	25	V
V_{EBO}	Emitter to Base voltage	4	V
V_{CEO}	Collector to Emitter voltage	20	V
I_{CM}	Peak collector current	1	A
I_C	Collector current	700	mA
P_C	Collector dissipation(Ta=25℃)	500	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=10 μA,I_E=0	25			V
$V_{(BR)EBO}$	E to B break down voltage	I_E=10 μA,I_C=0	4			V
$V_{(BR)CEO}$	C to E break down voltage	I_C=100 μA,R_{BE}=∞	20			V
I_{CBO}	Collector cut off current	V_{CB}=25V,I_E=0			1	μA
I_{EBO}	Emitter cut off current	V_{BE}=2V,I_C=0			1	μA
h_{FE} *	DC forward current gain	V_{CE}=4V,I_C=100mA	150		800	—
$V_{CE(sat)}$	C to E saturation voltage	I_C=500mA,I_B=25mA		0.2	0.5	V
f_T	Gain band width product	V_{CE}=6V,I_E=-10mA		180		MHz

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

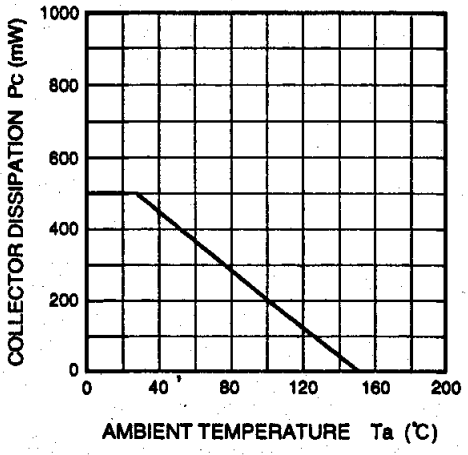
Marking	UE	UF	UG
h_{FE}	150 to 300	250 to 500	400 to 800

2SC5212

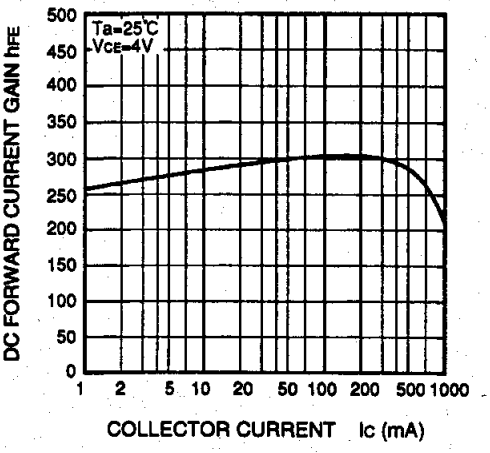
FOR HIGH CURRENT DRIVE APPLICATION
SILICON NPN EPITAXIAL TYPE

TYPICAL CHARACTERISTICS

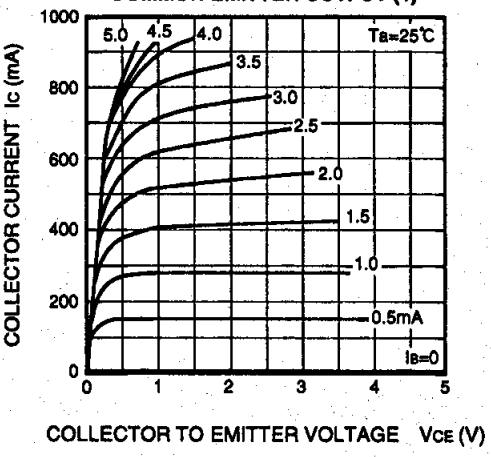
COLLECTOR DISSIPATION VS. AMBIENT TEMPERATURE



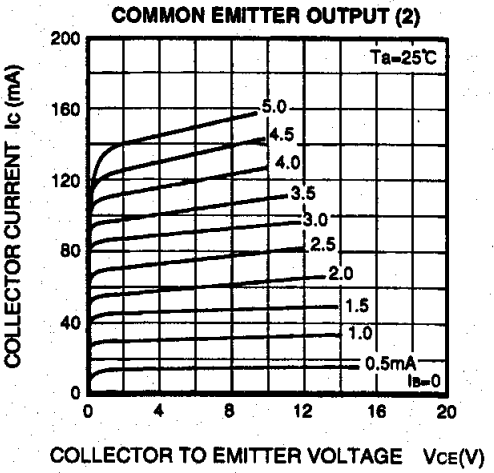
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



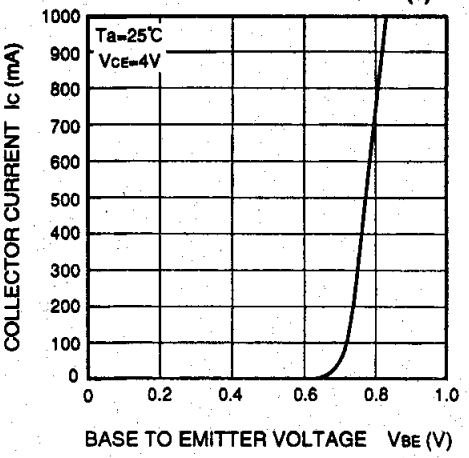
COMMON EMITTER OUTPUT (1)



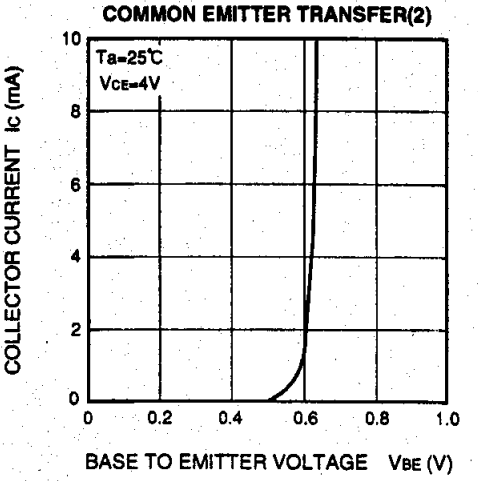
COMMON EMITTER OUTPUT (2)



COMMON EMITTER TRANSFER(1)



COMMON EMITTER TRANSFER(2)



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.