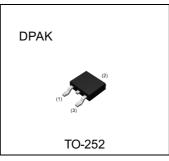


2SCR572D3

Parameter	Value
V _{CEO}	30V
۱ _C	5A



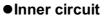


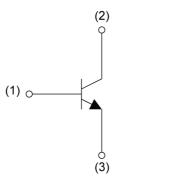
Features

- 1) Suitable for Power Driver.
- 2) Complementary PNP Types : 2SAR572D3.
- 3) Low V_{CE(sat)}

V_{CE(sat)}=400mV(Max.).

(I_C/I_B=2A/100mA)





- (1) Base
- (2) Collector
- (3) Emitter

Application

LOW FREQUENCY AMPLIFIER

Packaging specifications

Part No.	Package	Taping code	Reel size (mm)	Tape width (mm)	Basic ordering unit.(pcs)	Marking
2SCR572D3 TO-252		TL	330	16	2500	2SCR572D3
230837203	10-252	TL1	330	10	2500	230837203

• Absolute maximum ratings ($T_a = 25^{\circ}C$)

Parameter	Symbol	Values	Unit
Collector-base voltage	V _{CBO}	30	V
Collector-emitter voltage	V _{CEO}	30	V
Emitter-base voltage	V _{EBO}	6	V
	Ι _C	5	А
Collector current	I _{CP} *1	10	Α
Power dissipation	P _D *2	10	W
Junction temperature	Tj	150	°C
Range of storage temperature	T _{stg}	-55 to +150	°C

• Electrical characteristics (T_a = 25°C)

Deremeter	Symbol	Conditions	Values			Unit
Parameter	Symbol	Conditions	Min. Typ.		Max.	Unit
Collector-base breakdown voltage	BV_{CBO}	Ι _C = 100μΑ	30	-	-	V
Collector-emitter breakdown voltage	BV_{CEO}	I _C = 1mA	30	-	-	V
Emitter-base breakdown voltage	BV_{EBO}	Ι _Ε = 100μΑ	6	-	-	V
Collector cut-off current	I _{CBO}	V _{CB} = 30V	-	-	1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 4V	-	-	1	μA
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 2A, I _B = 100mA	-	200	400	mV
DC current gain	h _{FE}	V _{CE} = 3V, I _C = 500mA	200	-	500	-
Transition frequency	f _T *3	V _{CE} = 10V, I _E = -500mA, f = 100MHz	-	300	-	MHz
Output capacitance	C _{ob}	V _{CB} = 10V, I _E = 0A, f = 1MHz	-	30	-	pF
Turn-On time	t _{on}	I _C = 2.5A, I _{B1} = 250mA,	-	100	-	ns
Storage time	t _{stg}	I _{B2} = -250mA, V _{CC} ≃ 10V,	-	350	-	ns
Fall time	t _f	$R_L = 4\Omega$ See test circuit	-	250	-	ns

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*1 Pw=10ms Single Pulse

*2 Tc=25°C

*3 Pulsed

• Electrical characteristic curves($T_a = 25^{\circ}C$)

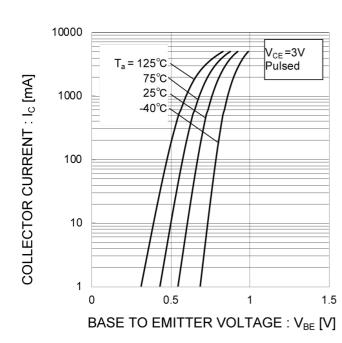
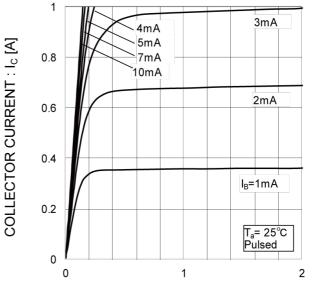


Fig.1 Grounded Emitter Propagation Characteristics

Fig.2 Typical Output Characteristics



COLLECTOR TO EMITTER VOLTAGE : V_{CE} [V]

Fig.3 DC Current Gain vs. Collector Current(I)

DC CURRENT GAIN : hFE

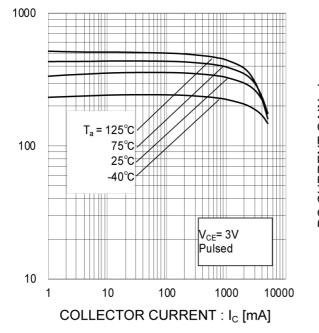
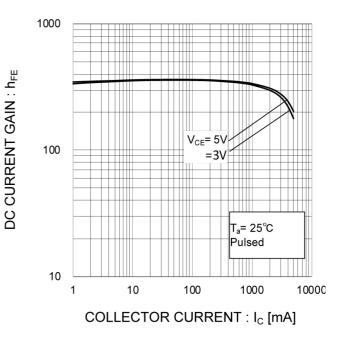


Fig.4 DC Current Gain vs. Collector Current(II)



• Electrical characteristic curves ($T_a = 25^{\circ}C$)



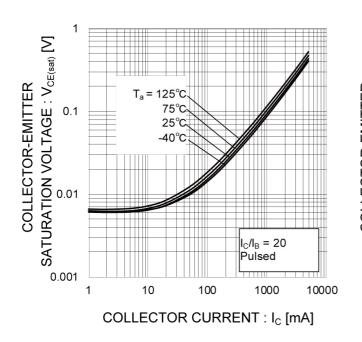


Fig.7 Base-Emitter Saturation Voltage vs. Collector Current

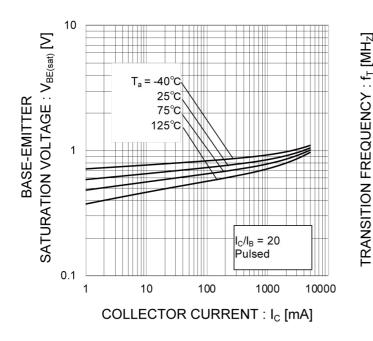


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current(II)

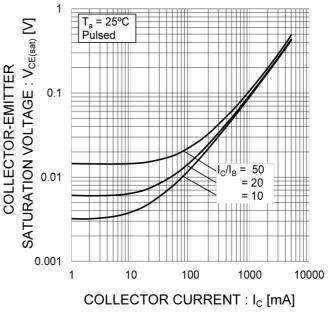
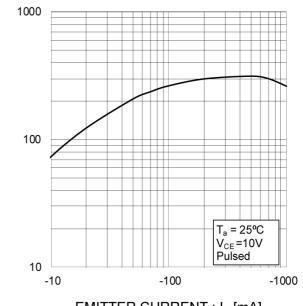


Fig.8 Gain Bandwidth Product vs. Emitter Current



EMITTER CURRENT : IE [mA]

• Electrical characteristic curves(T_a = 25°C)

Fig.9 Emitter input capacitance vs. Emitter-Base Voltage Collector output capacitance vs. Collector-Base Voltage

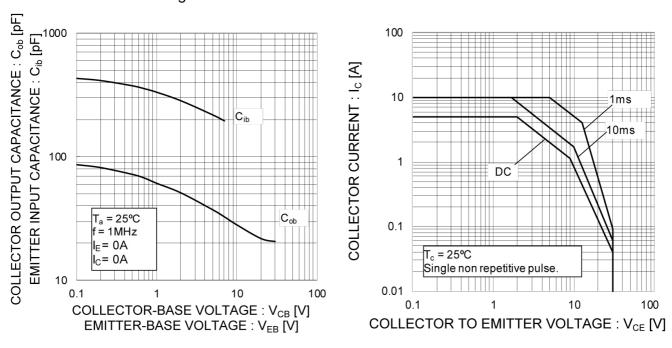
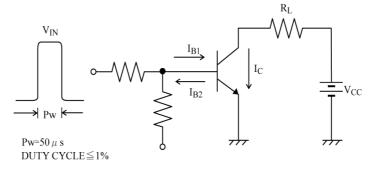
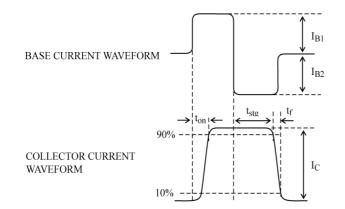


Fig.10 Safe Operating Area

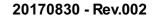
SWITCHING TIME TEST CIRCUIT



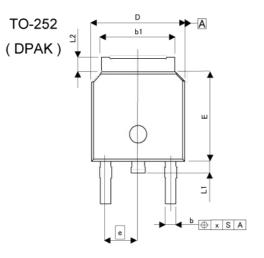


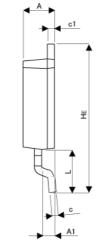
5/7

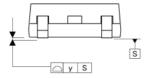
ROHM

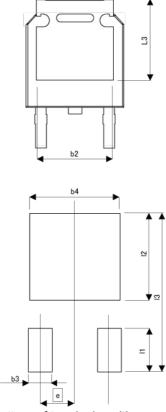


$\bullet \textit{Dimensions}(\mathsf{TL})$









Pattern of terminal position areas [Not a recommended pattern of soldering pads]

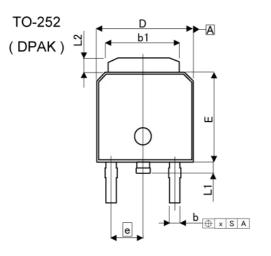
DIM	MILIMETERS		INC	HES
DIN	MIN	MAX	MIN	MAX
A	2.10	2.30	0.083	0.091
A1	0.70	1.10	0.028	0.043
b	0.65	0.85	0.026	0.033
b1	5.10	5.40	0.201	0.213
b2	5.	10	0.2	01
с	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.40	6.80	0.252	0.268
е	2.30		0.091	
E	6.00	6.40	0.236	0.252
HE	9.50	10.50	0.374	0.413
L	2.	90	0.1	14
L1	0.70	0.90	0.028	0.035
L2	0.70	1.30	0.028	0.051
L3	5.30		0.2	09
х	-	0.10	-	0.004
у	-	0.10	-	0.004

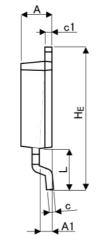
DIM -	MILIMETERS		INCHES	
Divi	MIN	MAX	MIN	MAX
b3	-	1.10	2 L	0.043
b4	-	5.40	· - ·	0.213
11	-	2.90	-	0.114
12	-	5.50		0.217
13	-	10.50		0.413

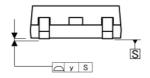
Dimension in mm/inches

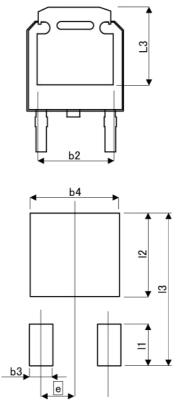


• Dimensions (TL1)









Pattern of terminal position areas [Not a recommended pattern of soldering pads]

DIM	MILIMETERS		INC	HES
DIM	MIN	MAX	MIN	MAX
A	2.20	2.40	0.087	0.094
A1	0.70	1.10	0.028	0.043
b	0.60	0.90	0.024	0.035
b1	5.20	5.50	0.205	0.217
b2	5.	35	0.2	211
С	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.40	6.80	0.252	0.268
е	2.	30	0.0	91
E	6.00	6.40	0.236	0.252
HE	9.40	10.40	0.370	0.409
L	2.	2.70		06
L1	0.60	1.00	0.024	0.039
L2	0.70	1.30	0.028	0.051
L3	5.	30	0.2	209
x	-	0.25	-	0.010
У	-	0.10	-	0.004
DIM	MILIMETERS		INC	HES
Divi	MIN	MAX	MIN	MAX
b3		1.15	2	0.045
b4	-	5.55	-	0.219
1	-	2.77	-	0.109
12	-	5.50	-	0.217
13	-	10.40	L.	0.409

Dimension in mm/inches



Notice

Precaution on using ROHM Products

1. Our Products are designed and manufactured for application in ordinary electronic equipments (such as AV equipment, OA equipment, telecommunication equipment, home electronic appliances, amusement equipment, etc.). If you intend to use our Products in devices requiring extremely high reliability (such as medical equipment ^(Note 1), transport equipment, traffic equipment, aircraft/spacecraft, nuclear power controllers, fuel controllers, car equipment including car accessories, safety devices, etc.) and whose malfunction or failure may cause loss of human life, bodily injury or serious damage to property ("Specific Applications"), please consult with the ROHM sales representative in advance. Unless otherwise agreed in writing by ROHM in advance, ROHM shall not be in any way responsible or liable for any damages, expenses or losses incurred by you or third parties arising from the use of any ROHM's Products for Specific Applications.

(Note1) Medical Equipment Classification of the Specific Applications

JÁPAN	USA	EU	CHINA
CLASSⅢ	CLASSⅢ	CLASS II b	CLASSII
CLASSⅣ	CLASSII	CLASSⅢ	CLASSI

- 2. ROHM designs and manufactures its Products subject to strict quality control system. However, semiconductor products can fail or malfunction at a certain rate. Please be sure to implement, at your own responsibilities, adequate safety measures including but not limited to fail-safe design against the physical injury, damage to any property, which a failure or malfunction of our Products may cause. The following are examples of safety measures:
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 - [b] Installation of redundant circuits to reduce the impact of single or multiple circuit failure
- 3. Our Products are designed and manufactured for use under standard conditions and not under any special or extraordinary environments or conditions, as exemplified below. Accordingly, ROHM shall not be in any way responsible or liable for any damages, expenses or losses arising from the use of any ROHM's Products under any special or extraordinary environments or conditions. If you intend to use our Products under any special or extraordinary environments or conditions (as exemplified below), your independent verification and confirmation of product performance, reliability, etc, prior to use, must be necessary:
 - [a] Use of our Products in any types of liquid, including water, oils, chemicals, and organic solvents
 - [b] Use of our Products outdoors or in places where the Products are exposed to direct sunlight or dust
 - [c] Use of our Products in places where the Products are exposed to sea wind or corrosive gases, including Cl₂, H₂S, NH₃, SO₂, and NO₂
 - [d] Use of our Products in places where the Products are exposed to static electricity or electromagnetic waves
 - [e] Use of our Products in proximity to heat-producing components, plastic cords, or other flammable items
 - [f] Sealing or coating our Products with resin or other coating materials
 - [g] Use of our Products without cleaning residue of flux (even if you use no-clean type fluxes, cleaning residue of flux is recommended); or Washing our Products by using water or water-soluble cleaning agents for cleaning residue after soldering
 - [h] Use of the Products in places subject to dew condensation
- 4. The Products are not subject to radiation-proof design.
- 5. Please verify and confirm characteristics of the final or mounted products in using the Products.
- 6. In particular, if a transient load (a large amount of load applied in a short period of time, such as pulse. is applied, confirmation of performance characteristics after on-board mounting is strongly recommended. Avoid applying power exceeding normal rated power; exceeding the power rating under steady-state loading condition may negatively affect product performance and reliability.
- 7. De-rate Power Dissipation depending on ambient temperature. When used in sealed area, confirm that it is the use in the range that does not exceed the maximum junction temperature.
- 8. Confirm that operation temperature is within the specified range described in the product specification.
- 9. ROHM shall not be in any way responsible or liable for failure induced under deviant condition from what is defined in this document.

Precaution for Mounting / Circuit board design

- 1. When a highly active halogenous (chlorine, bromine, etc.) flux is used, the residue of flux may negatively affect product performance and reliability.
- 2. In principle, the reflow soldering method must be used on a surface-mount products, the flow soldering method must be used on a through hole mount products. If the flow soldering method is preferred on a surface-mount products, please consult with the ROHM representative in advance.

For details, please refer to ROHM Mounting specification

Precautions Regarding Application Examples and External Circuits

- 1. If change is made to the constant of an external circuit, please allow a sufficient margin considering variations of the characteristics of the Products and external components, including transient characteristics, as well as static characteristics.
- 2. You agree that application notes, reference designs, and associated data and information contained in this document are presented only as guidance for Products use. Therefore, in case you use such information, you are solely responsible for it and you must exercise your own independent verification and judgment in the use of such information contained in this document. ROHM shall not be in any way responsible or liable for any damages, expenses or losses incurred by you or third parties arising from the use of such information.

Precaution for Electrostatic

This Product is electrostatic sensitive product, which may be damaged due to electrostatic discharge. Please take proper caution in your manufacturing process and storage so that voltage exceeding the Products maximum rating will not be applied to Products. Please take special care under dry condition (e.g. Grounding of human body / equipment / solder iron, isolation from charged objects, setting of lonizer, friction prevention and temperature / humidity control).

Precaution for Storage / Transportation

- 1. Product performance and soldered connections may deteriorate if the Products are stored in the places where:
 - [a] the Products are exposed to sea winds or corrosive gases, including Cl2, H2S, NH3, SO2, and NO2
 - [b] the temperature or humidity exceeds those recommended by ROHM
 - [c] the Products are exposed to direct sunshine or condensation
 - [d] the Products are exposed to high Electrostatic
- 2. Even under ROHM recommended storage condition, solderability of products out of recommended storage time period may be degraded. It is strongly recommended to confirm solderability before using Products of which storage time is exceeding the recommended storage time period.
- 3. Store / transport cartons in the correct direction, which is indicated on a carton with a symbol. Otherwise bent leads may occur due to excessive stress applied when dropping of a carton.
- 4. Use Products within the specified time after opening a humidity barrier bag. Baking is required before using Products of which storage time is exceeding the recommended storage time period.

Precaution for Product Label

A two-dimensional barcode printed on ROHM Products label is for ROHM's internal use only.

Precaution for Disposition

When disposing Products please dispose them properly using an authorized industry waste company.

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2SCR572D3 - Web Page

Distribution Inventory

Part Number	2SCR572D3
Package	TO-252
Unit Quantity	2500
Minimum Package Quantity	2500
Packing Type	Taping
Constitution Materials List	inquiry
RoHS	Yes