查询2SC4481供应商 捷多邦，专业PCB打样工厂，24小时加急出货

Ordering number:EN3022

PNP/NPN Epitaxial Planar Silicon Transistors

# 2SA1701/2SC4481

## Low-Frequency General-Purpose Amplifier Applications

## Applications

· AF power amplifier, medium-speed switching, small-sized motor driver applications.

## Features

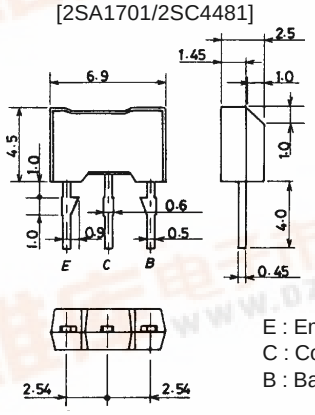
· Large current capacity.
· Low collector-to-emitter saturation voltage.

## Package Dimensions

unit:mm

2064

[2SA1701/2SC4481]




E : Emitter
C : Collector
B : Base

SANYO : NMP

( ) : 2SA1701

## Specifications

### Absolute Maximum Ratings at Ta = 25˚C

| Parameter | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Collector-to-Base Voltage | $V_{CBO}$ | | (–)15 | V |
| Collector-to-Emitter Voltage | $V_{CEO}$ | | (–)15 | V |
| Emitter-to-Base Voltage | $V_{EBO}$ | | (–)5 | V |
| Collector Current | $I_C$ | | (–)1.5 | A |
| Collector Current (Pulse) | $I_{CP}$ | | (–)3 | A |
| Collector Dissipation | $P_C$ | | 0.9 | W |
| Junction Temperature | Tj | | 150 | ˚C |
| Storage Temperature | Tstg | | –55 to +150 | ˚C |

### Electrical Characteristics at Ta = 25˚C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$=(–)12V, $I_E$=0 | | | (–)100 | nA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$=(–)4V, $I_C$=0 | | | (–)100 | nA |
| DC Current Gain | $h_{FE}1$ | $V_{CE}$=(–)2V, $I_C$=(–)50mA | 140* | | 560* | |
| | $h_{FE}2$ | $V_{CE}$=(–)2V, $I_C$=(–)1A | 70 | | | |
| Gain-Bandwidth Product | $f_T$ | $V_{CE}$=(–)2V, $I_C$=(–)50mA | | (300) | | MHz |
| | | | | 200 | | MHz |

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges,or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

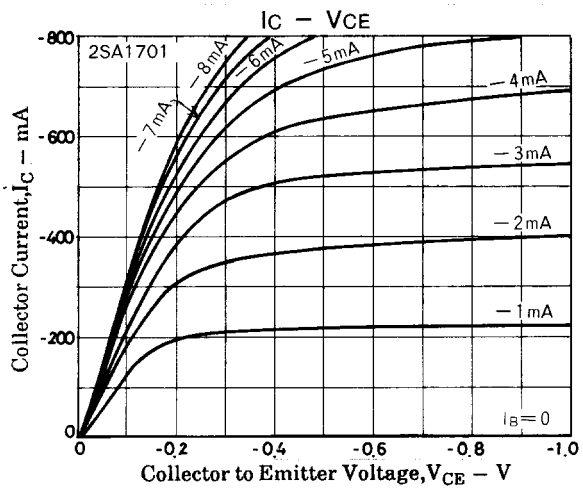
找PDF 维库一下 pdf.dzsc.com

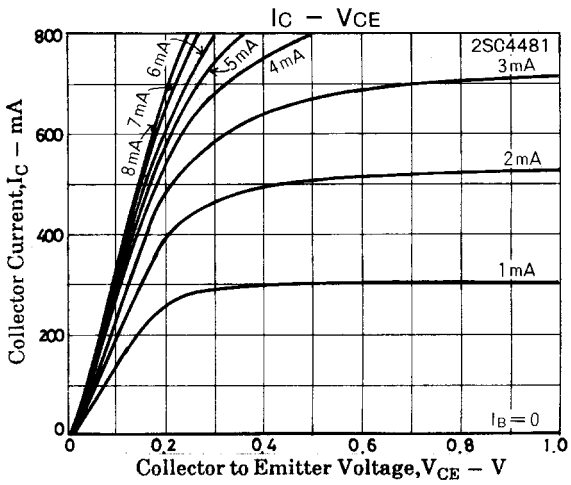
# 2SA1701/2SC4481

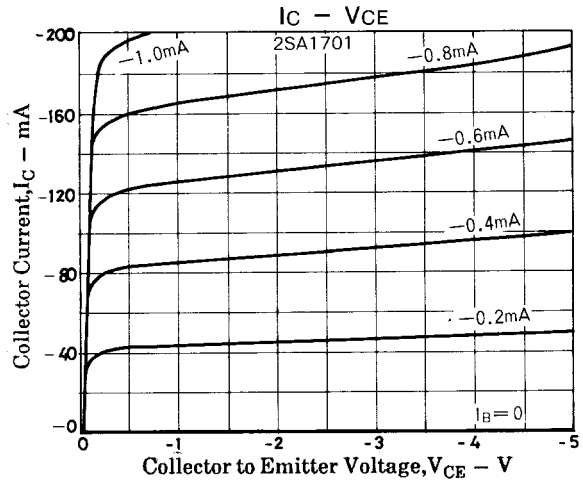
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}1$ | $I_C$=(–)5mA, $I_B$=(–)0.5mA | | (–10) | (–)25 | mV |
| | $V_{CE(sat)}2$ | $I_C$=(–)400mA, $I_B$=(–)20mA | | (–)100 | (–)200 | mV |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C$=(–)400mA, $I_B$=(–)20mA | | (–)0.9 | (–)1.2 | V |
| Output Capacitance | $C_{ob}$ | $V_{CB}$=(–)10V, f=1MHz | | (15)10 | | pF |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C$=(–)10μA, $I_E$=0 | (–)15 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C$=(–)1mA, $R_{BE}$=∞ | (–)15 | | | V |
| Emitter-to-Base Breakdown Votage | $V_{(BR)EBO}$ | $I_E$=(–)10μA, $I_C$=0 | (–)5 | | | V |

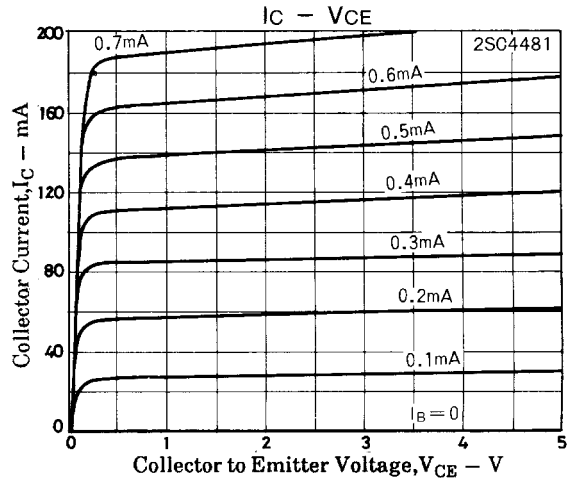
* : 2SA1701/2SC4481 are classified by 50mA $h_{FE}$ as follows :

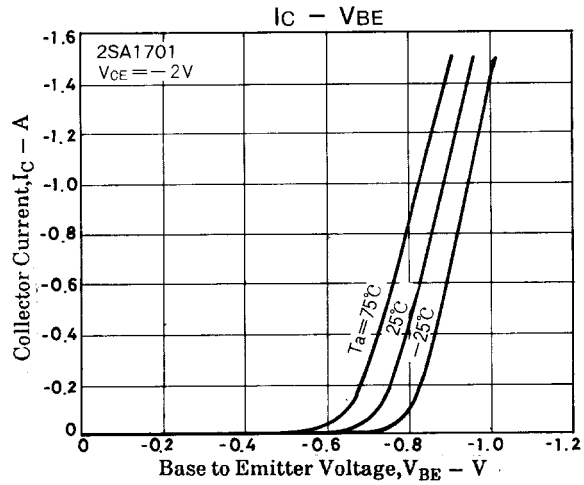
| | | |
|---|---|---|
| 140 S 280 | 200 T 400 | 280 U 560 |

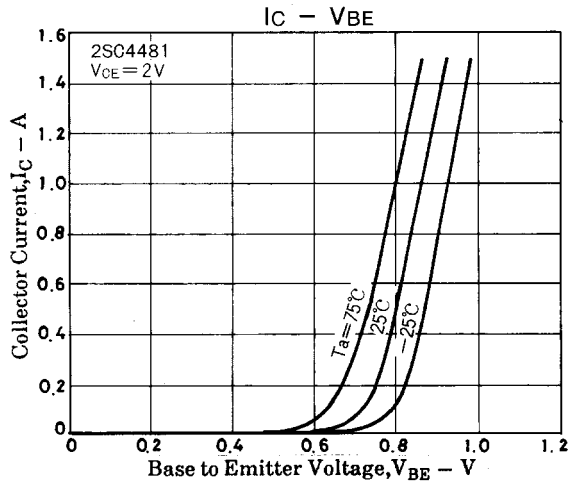


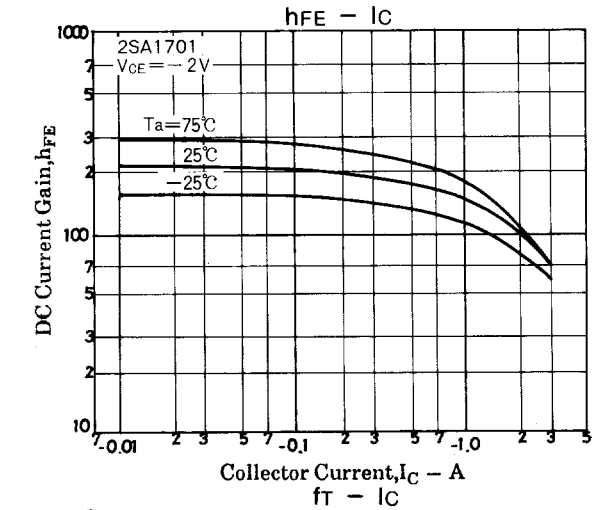



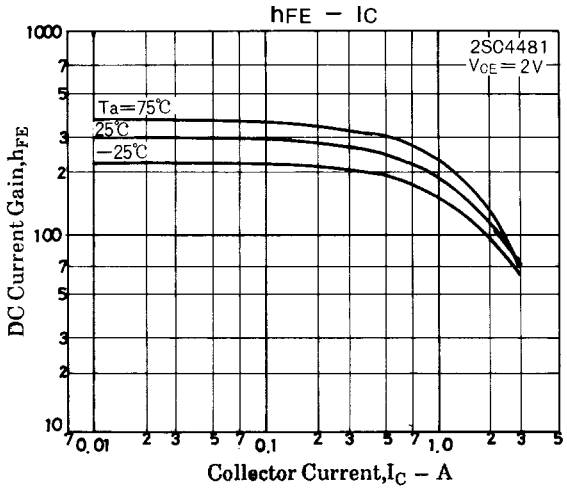



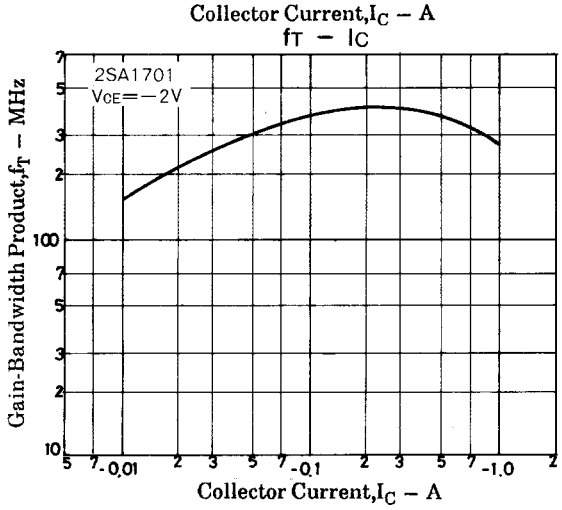



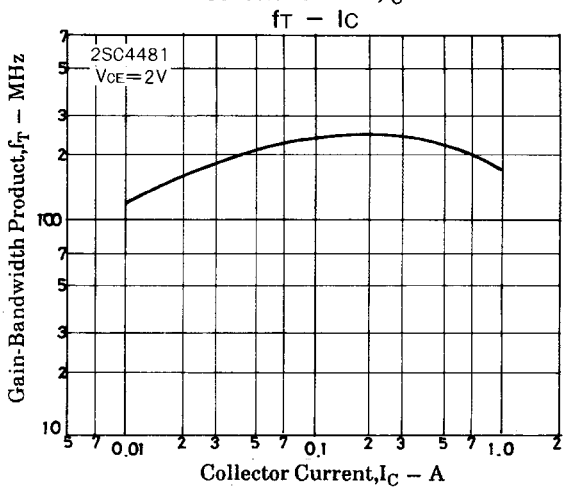



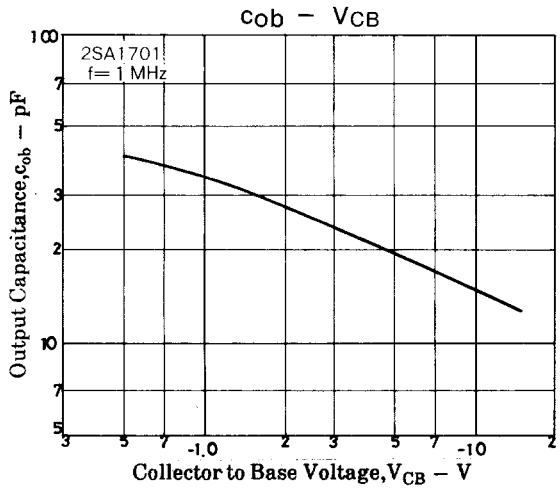



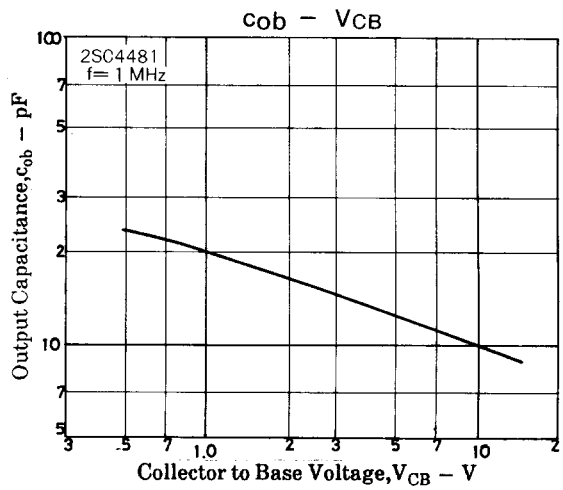

hFE – IC
2SA1701
VCE=–2V
Ta=75℃
25℃
–25℃
DC Current Gain,hFE
Collector Current,IC – A

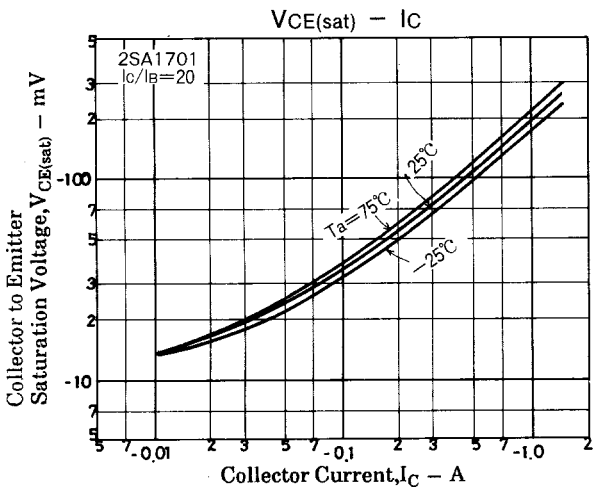

hFE – IC
2SC4481
VCE=2V
Ta=75℃
25℃
–25℃
DC Current Gain,hFE
Collector Current,IC – A

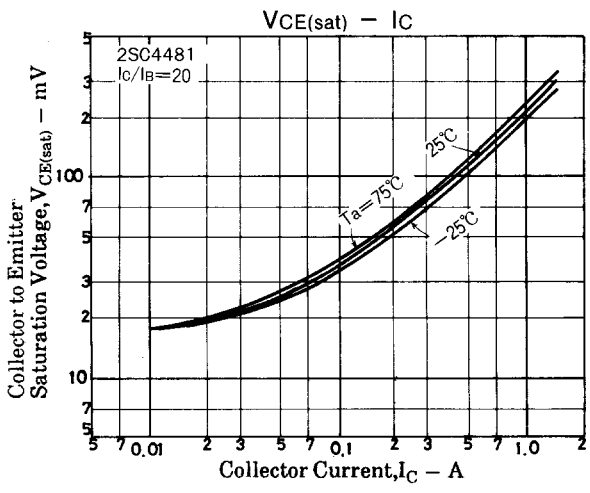

fT – IC
2SA1701
VCE=–2V
Gain-Bandwidth Product,fT – MHz
Collector Current,IC – A

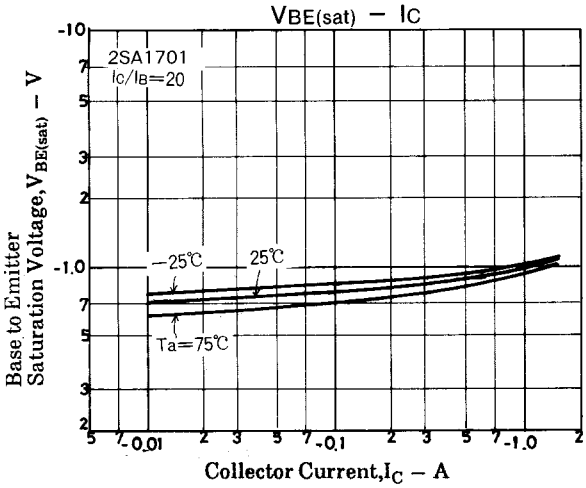

fT – IC
2SC4481
VCE=2V
Gain-Bandwidth Product,fT – MHz
Collector Current,IC – A

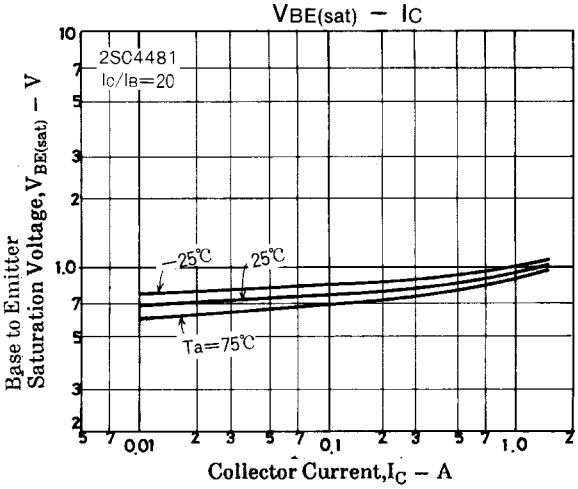

Cob – VCB
2SA1701
f=1 MHz
Output Capacitance,cob – pF
Collector to Base Voltage,VCB – V

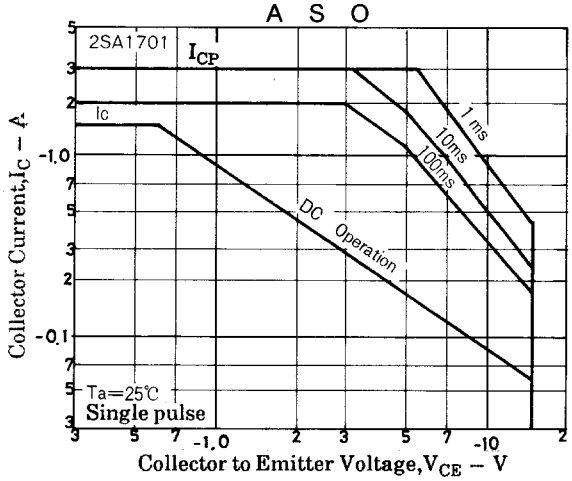

Cob – VCB
2SC4481
f=1 MHz
Output Capacitance,cob – pF
Collector to Base Voltage,VCB – V

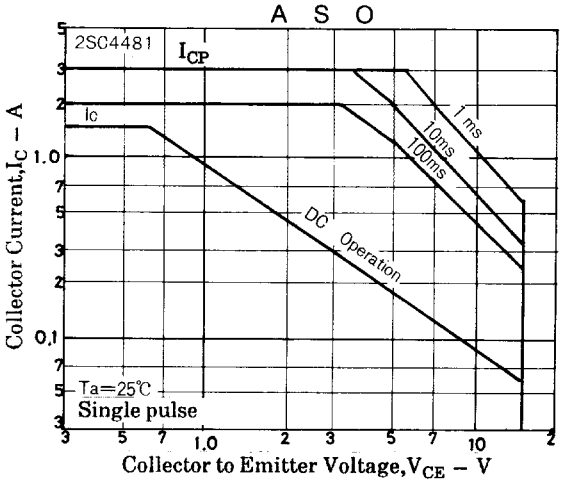

VCE(sat) – IC
2SA1701
IC/IB=20
Ta=75℃
25℃
–25℃
Collector to Emitter Saturation Voltage,VCE(sat) – mV
Collector Current,IC – A

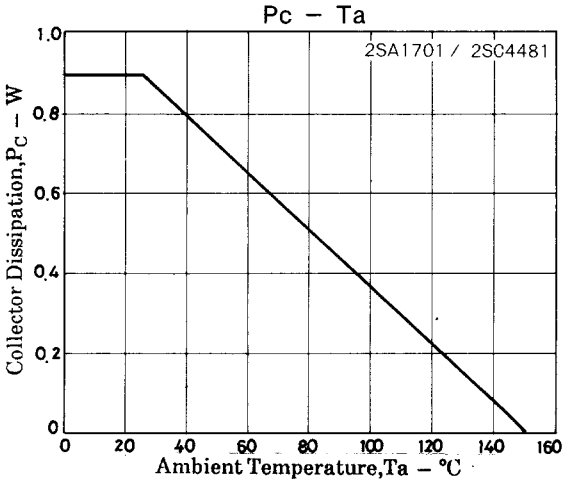

VCE(sat) – IC
2SC4481
IC/IB=20
Ta=75℃
25℃
–25℃
Collector to Emitter Saturation Voltage,VCE(sat) – mV
Collector Current,IC – A


VBE(sat) – IC
2SA1701
IC/IB=20
–25℃
25℃
Ta=75℃
Base to Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – A


VBE(sat) – IC
2SC4481
IC/IB=20
–25℃
25℃
Ta=75℃
Base to Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – A


A S O
2SA1701
ICP
IC
1 ms
10ms
100ms
DC Operation
Ta=25℃
Single pulse
Collector Current, IC – A
Collector to Emitter Voltage, VCE – V


A S O
2SC4481
ICP
IC
1 ms
10ms
100ms
DC Operation
Ta=25℃
Single pulse
Collector Current, IC – A
Collector to Emitter Voltage, VCE – V


Pc – Ta
2SA1701 / 2SC4481
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C

■ Specifications of any and all SANYO products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ SANYO Electric Co., Ltd. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.

■ In the event that any and all SANYO products described or contained herein fall under strategic products (including services) controlled under the Foreign Exchange and Foreign Trade Control Law of Japan, such products must not be exported without obtaining export license from the Ministry of International Trade and Industry in accordance with the above law.

■ No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of SANYO Electric Co., Ltd.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the SANYO product that you intend to use.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of August, 1998. Specifications and information herein are subject to change without notice.