Ordering number:ENN6324

PNP/NPN Epitaxial Planar Silicon Transistors

2SA608N/2SC536N

Low-Frequency General-Purpose Amplifier Applications

Applications

· Capable of being used in the low frequency to high frequency range.

Features

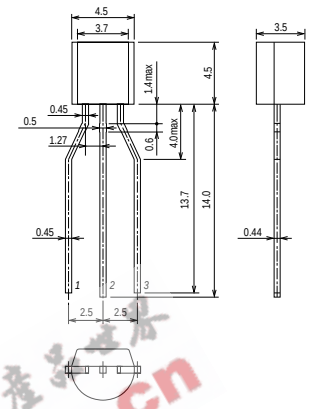
· Large current capacity and wide ASO.

Package Dimensions

unit:mm

2164

[2SA608N/2SC536N]



1 : Emitter
2 : Collector
3 : Base
SANYO : NPA-WA

( ) : 2SA608N

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–50)60	V
Collector-to-Emitter Voltage	V_{CEO}		(–)50	V
Emitter-to-Base Voltage	V_{EBO}		(–)6	V
Collector Current	I_C		(–)150	mA
Collector Current (Pulse)	I_{CP}		(–)400	mA
Collector Dissipation	P_C		500	mW
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}=(–)40V, I_E=0			(–)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)5V, I_C=0			(–)0.1	μA
DC Current Gain	$h_{FE}1$	V_{CE}=(–)6V, I_C=(–)1mA	160*		560*	
	$h_{FE}2$	V_{CE}=(–)6V, I_C=(–)0.1mA	70			

Continued on next page.

* The 2SA608N/2SC536N are classified by 1mA h_{FE} as follow

Rank	F	G
h_{FE}	160 to 320	280 to 560

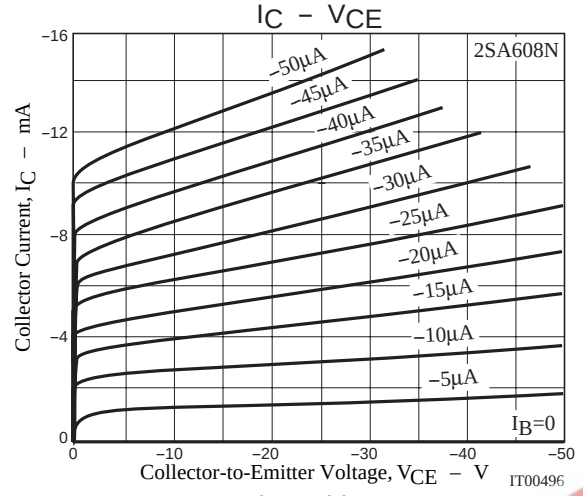
■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious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

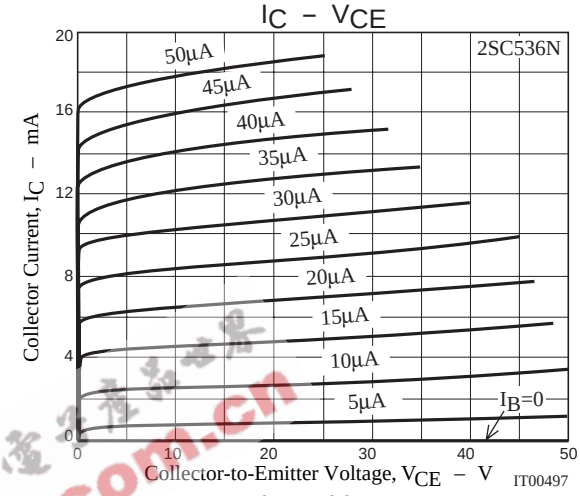
■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges,or other parameters) listed in products specifications of any and all SANYO products described or contained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

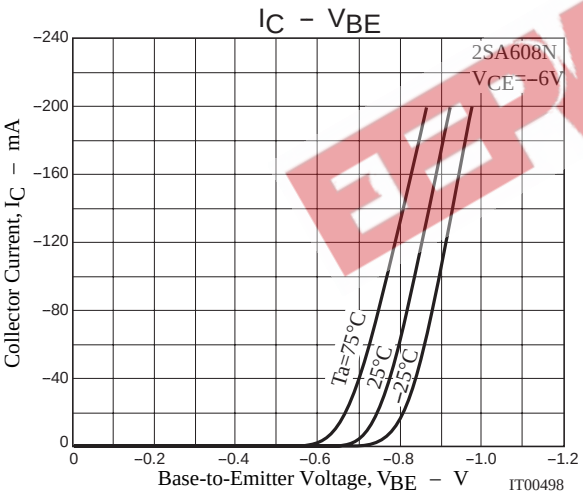
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

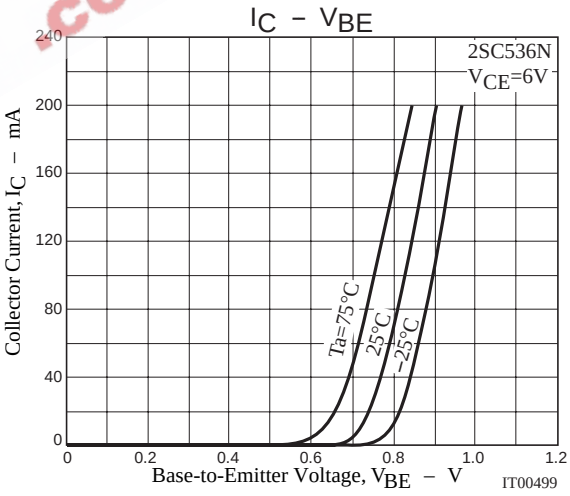
Continued on preceding page.

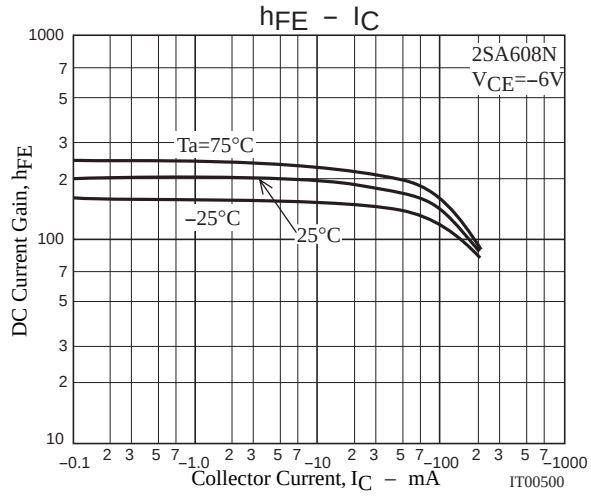
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	V_{CE}=(–)6V, I_C=(–)10mA		200		MHz
Output Capacitance	Cob	V_{CB}=(–)6V, f=1MHz		3.0		pF
				(4.5)		pF
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=(–)100mA, I_B=(–)10mA			(–)0.3	V
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=(–)100mA, I_B=(–)10mA			(–)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0	(–)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)6			V

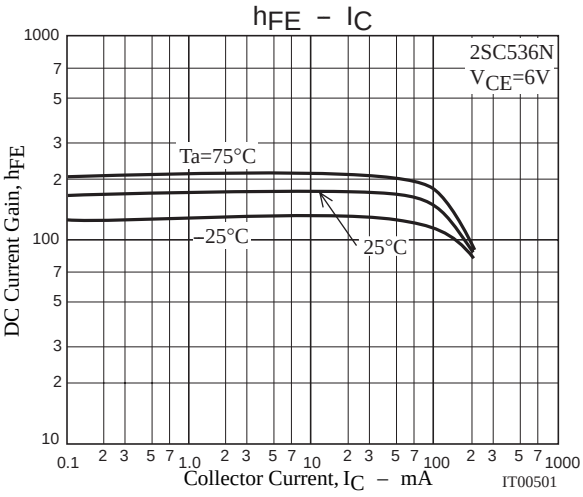


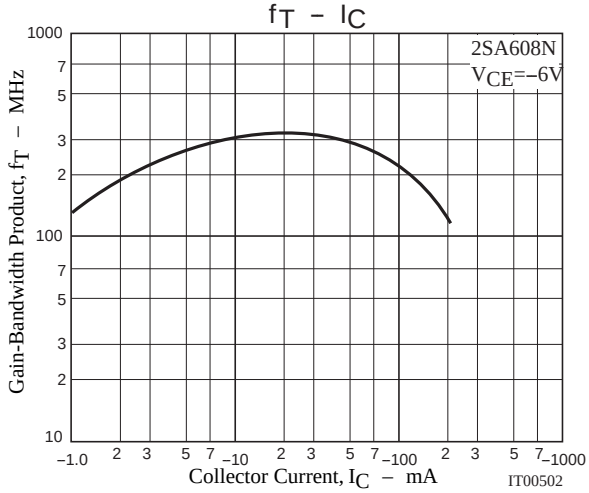


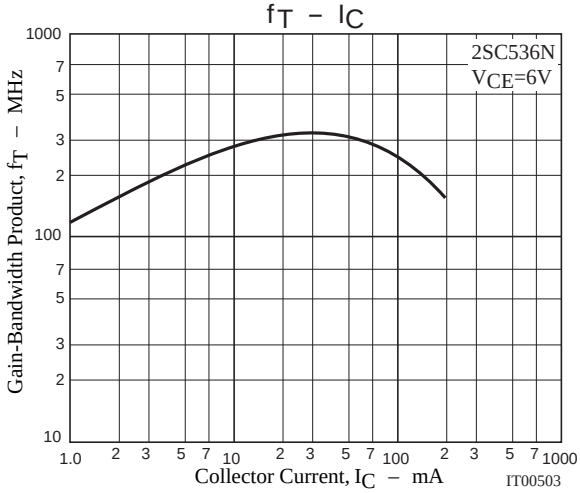


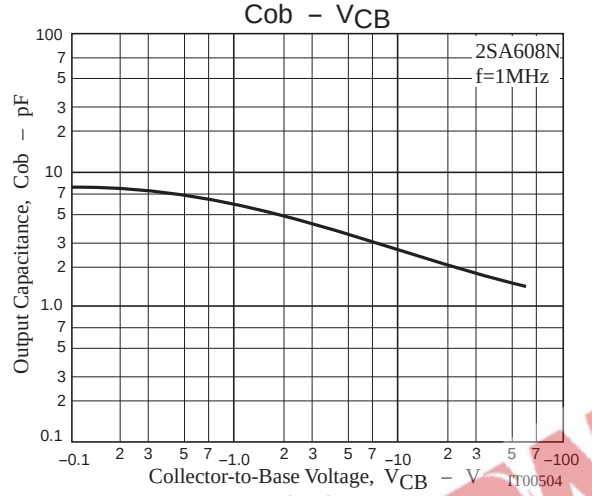


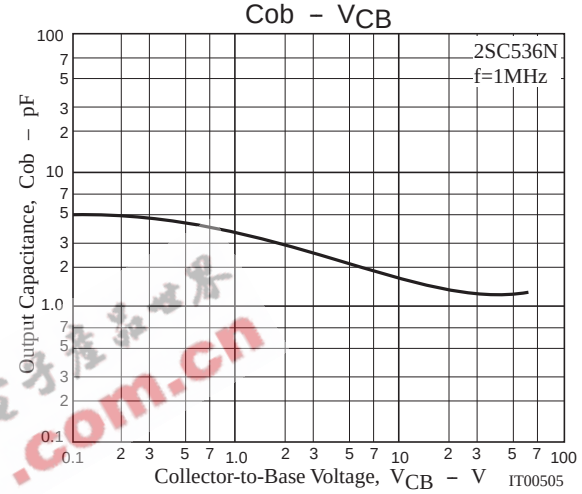


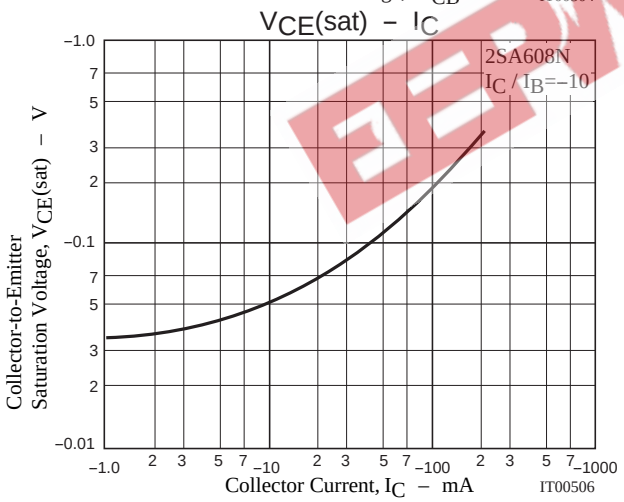


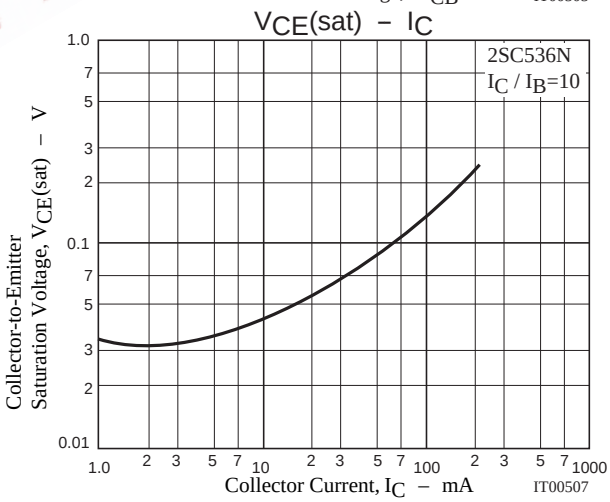

fT – IC
2SA608N
VCE=–6V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
IT00502

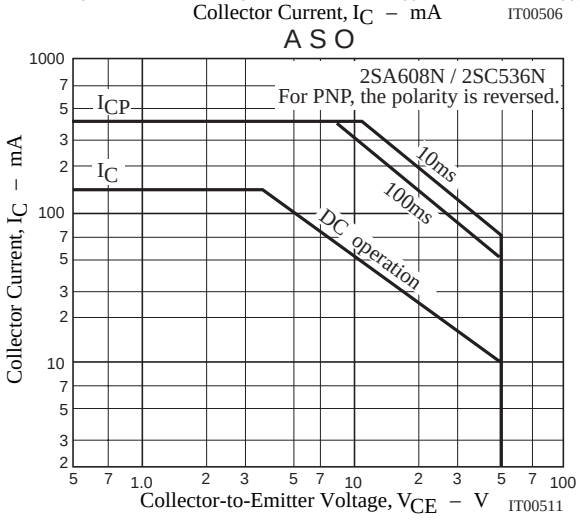

fT – IC
2SC536N
VCE=6V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
IT00503

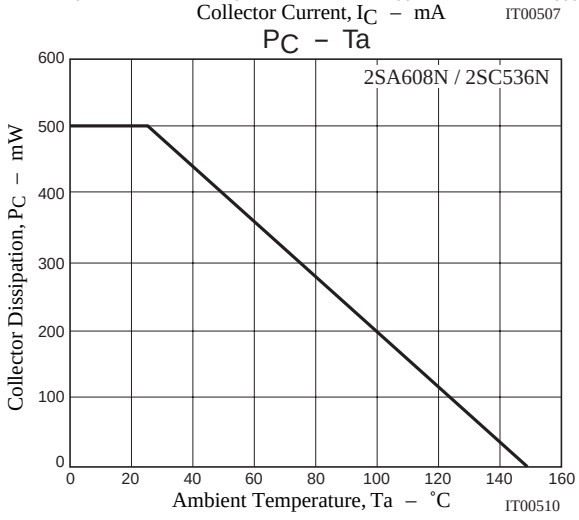

Cob – VCB
2SA608N
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT00504


Cob – VCB
2SC536N
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT00505


VCE(sat) – IC
2SA608N
IC / IB=–10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
IT00506


VCE(sat) – IC
2SC536N
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
IT00507


A S O
2SA608N / 2SC536N
For PNP, the polarity is reversed.
ICP
IC
10ms
100ms
DC operation
Collector Current, IC – mA
Collector-to-Emitter Voltage, VCE – V
IT00511


PC – Ta
2SA608N / 2SC536N
Collector Dissipation, PC – mW
Ambient Temperature, Ta – °C
IT00510

EEPW 電子產品世界 .com.cn

- 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 or all SANYO products(including technical data,services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned 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 January, 2000. Specifications and information herein are subject to change without notice.