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

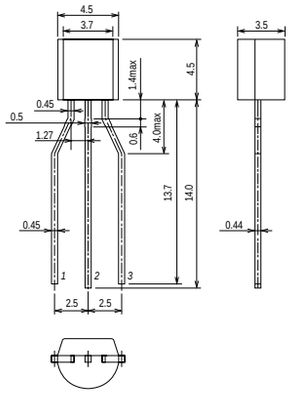
· Large current capacity and wide ASO.

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.

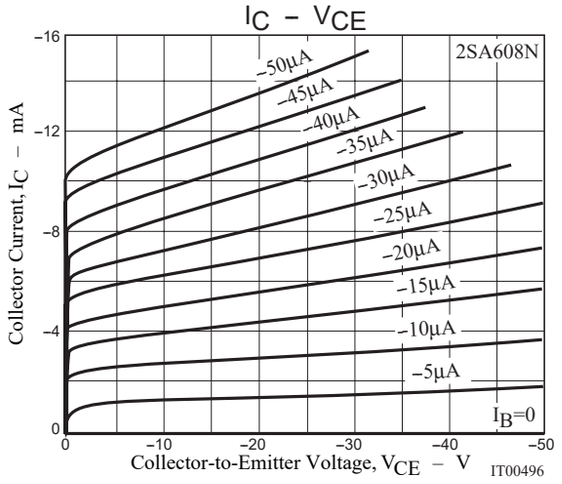
* The 2SA608N/2SC536N are classified by 1mA h_{FE} as follow

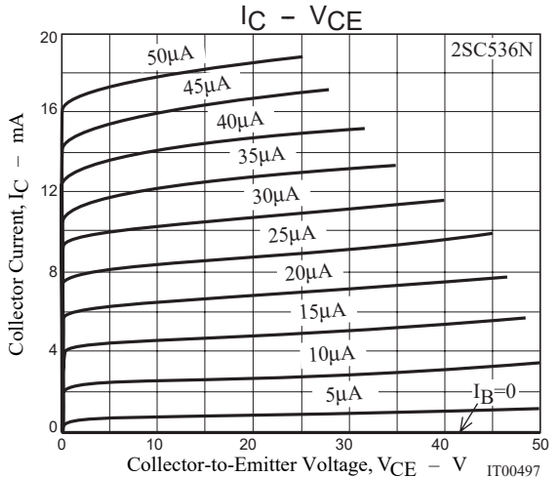
Rank	F	G
h_{FE}	160 to 320	280 to 560

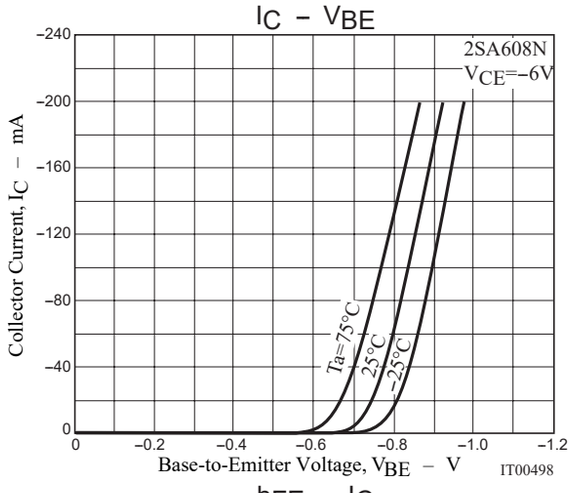
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

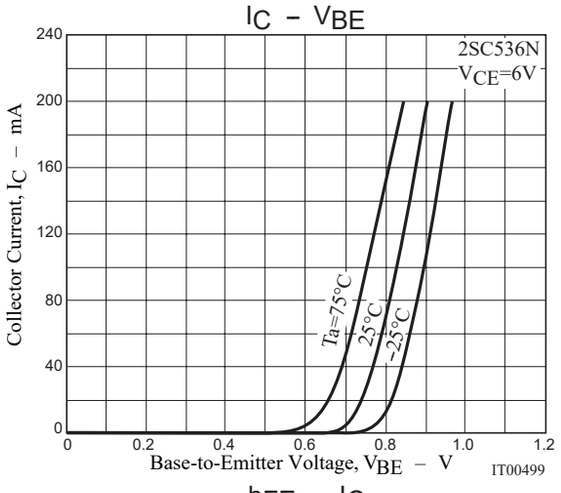
Continued on preceding page.

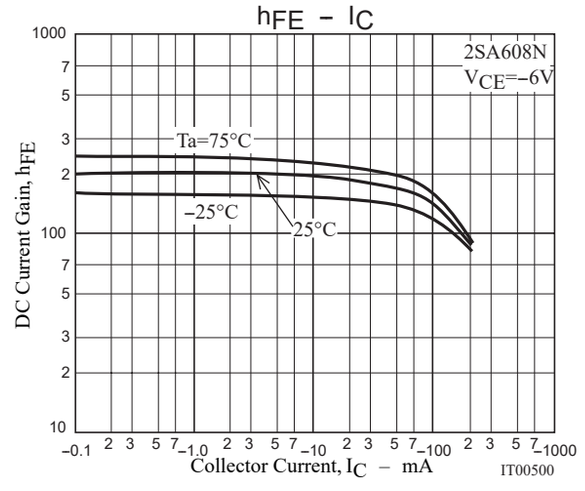
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	V_{CE}=(–)6V, I_C=(–)10mA		200		MHz
Output Capacitance	Cob	V_{CB}=(–)6V, f=1MHz		3.0		pF
				(4.5)		pF
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=(–)100mA, I_B=(–)10mA			(–)0.3	V
Base-to-Emitter Saturation 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

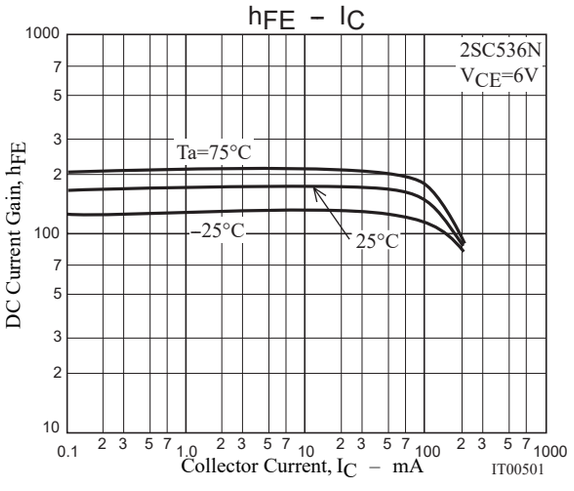


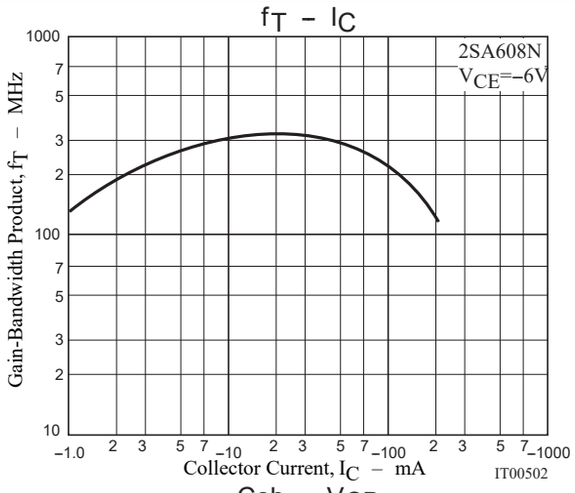


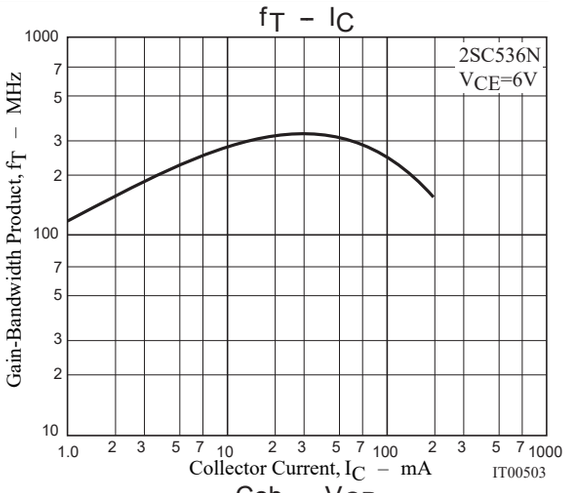


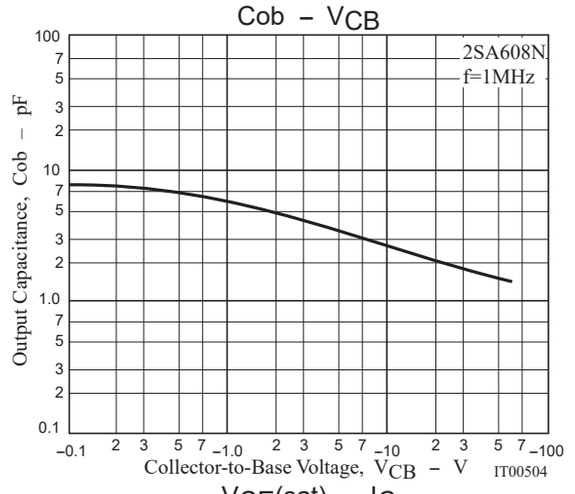


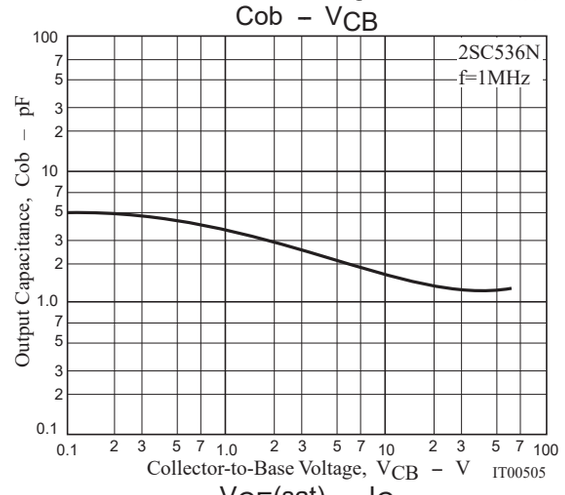


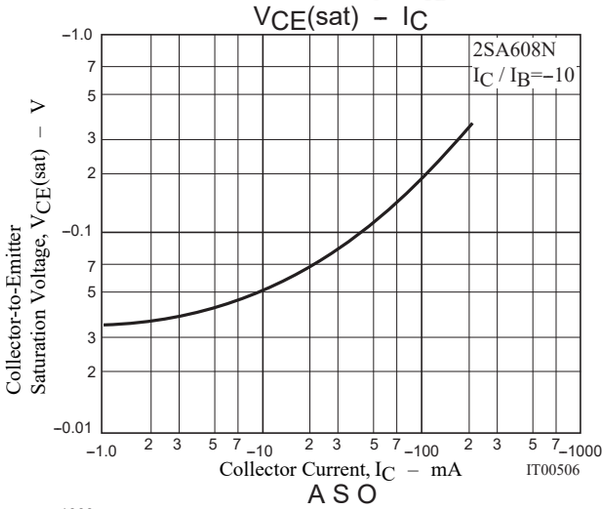


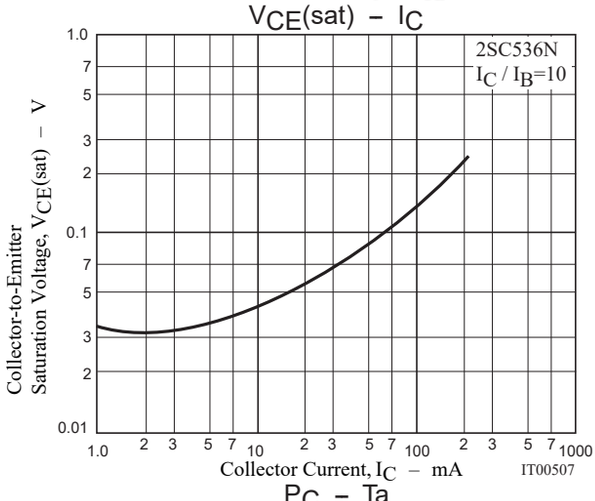

fT – IC
2SA608N
VCE=–6V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
IT00502

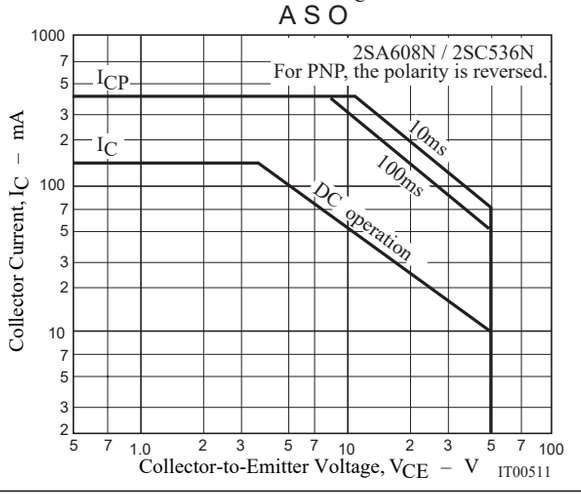

fT – IC
2SC536N
VCE=6V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
IT00503

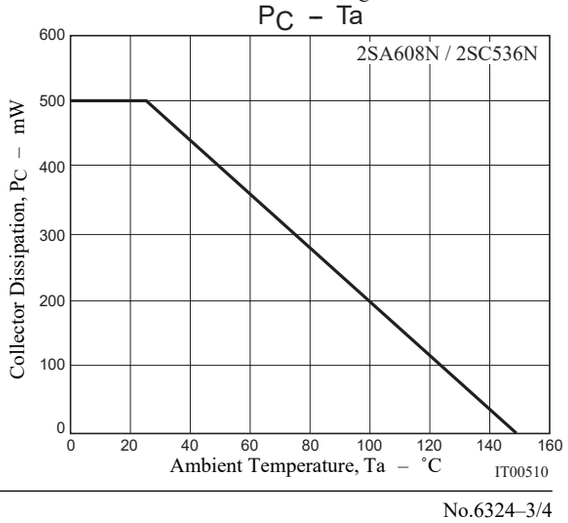

Cob – VCB
2SA608N
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT00504


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