Ordering number:ENN572E

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1016, 1016K/2SC2362, 2362K

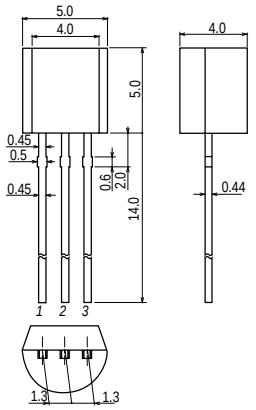
High-Voltage Low-Noise Amp Applications

Package Dimensions

unit:mm

2003B

[2SA1016, 1016K/2SC2362, 2362K]



1 : Emitter
2 : Collecor
3 : Base
SANYO : NP

( ) : 2SA1016, 1016K

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	2SA1016, 2SC2362	2SA1016K, 2SC2362K	Unit
Collector-to-Base Voltage	V_{CBO}		(–)120	(–)150	V
Collector-to-Emitter Voltage	V_{CEO}		(–)100	(–)120	V
Emitter-to-Base Voltage	V_{EBO}		(–)5		V
Collector Current	I_C		(–)50		mA
Collector Current (Pulse)	I_{CP}		(–)100		mA
Collector Dissipation	P_C		400		mW
Junction Temperature	Tj		125		˚C
Storage Temperature	Tstg		–55 to +125		˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)80V, I_E=0			(–)1.0	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0			(–)1.0	μA
DC Current Gain	h_{FE}	V_{CE}=(–)6V, I_C=(–)1mA	160*		960*	
Gain-Bandwidth Product	f_T	V_{CE}=(–)6V, I_C=(–)1mA		(110) 130		MHz
Output Capacitance	C_{ob}	V_{CB}=(–)10V, f=1MHz		(2.2) 1.8		pF

* : The 2SA1016, K/2SC2362, K are classified by 1mA h_{FE} as follows :

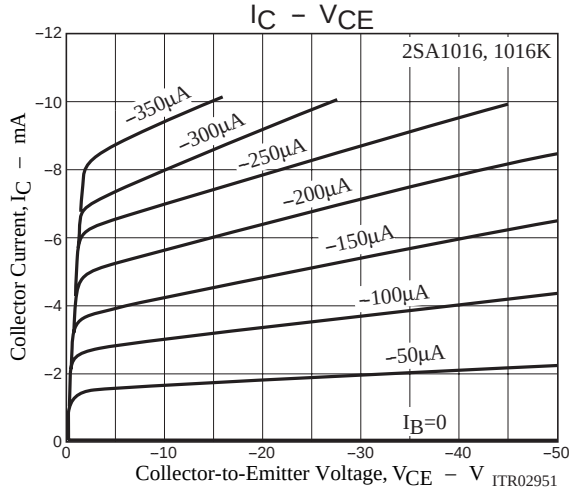
Rank	F	G	H
h_{FE}	160 to 320	280 to 560	480 to 960

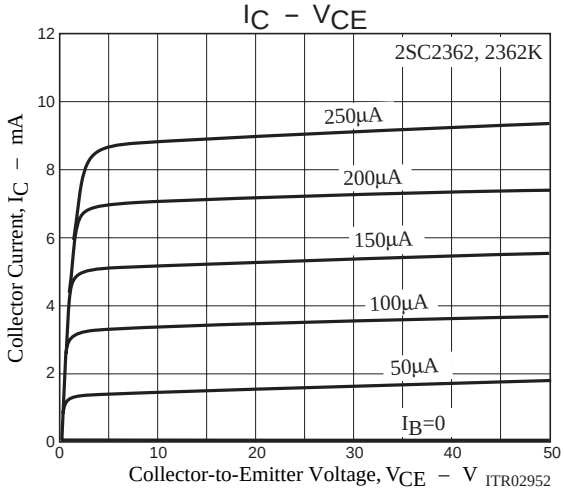
Continued on next page.

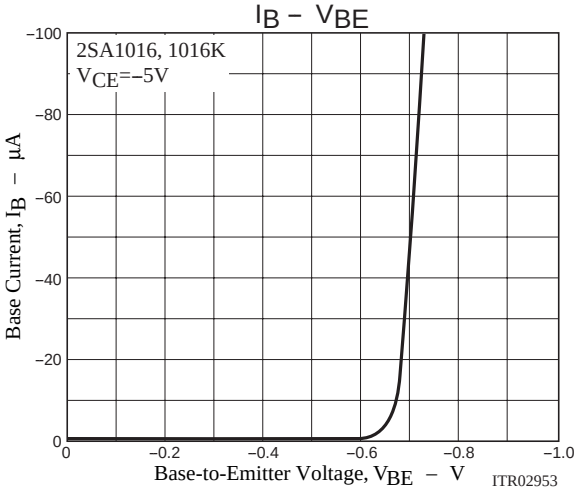
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

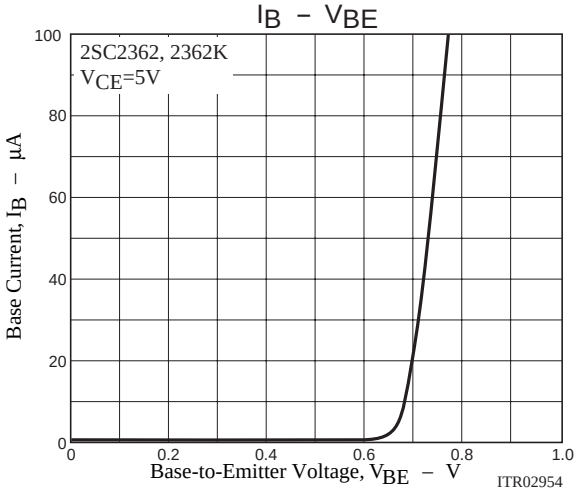
Continued from preceding page.

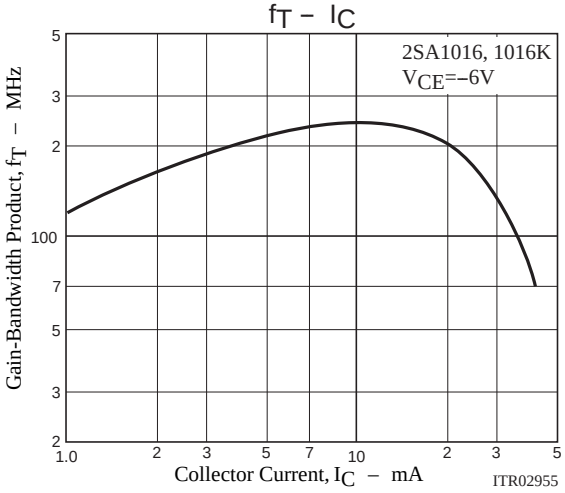
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)10mA, I_B=(–)1mA			(–)0.5	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0 [A1016, C2362]	(–)120			V
		I_C=(–)10μA, I_E=0 [A1016K, C2362K]	(–)150			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞ [A1016, C2362]	(–)100			V
		I_C=(–)1mA, R_{BE}=∞ [A1016K, C2362K]	(–)120			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0	(–)5			V
Noise Level	$V_{NO(ave)}$	V_{CC}=30V, I_C=1mA, R_g=56kΩ, V_G=77dB/1kHz			35	mV
Noise Peak Level	$V_{NO(peak)}$	V_{CC}=30V, I_C=1mA, R_g=56kΩ, $_{VG}$=77dB/1kHz			200	mV

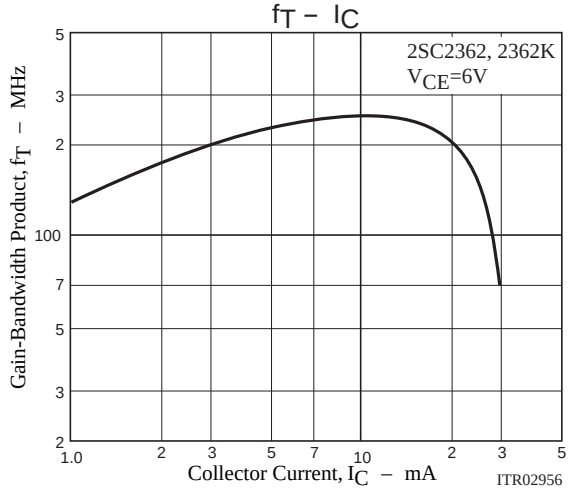




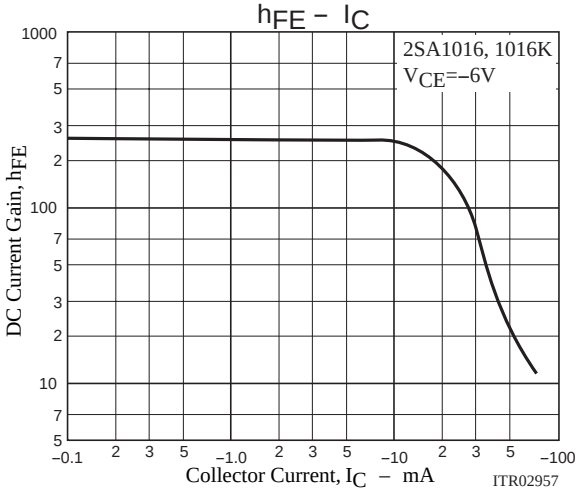




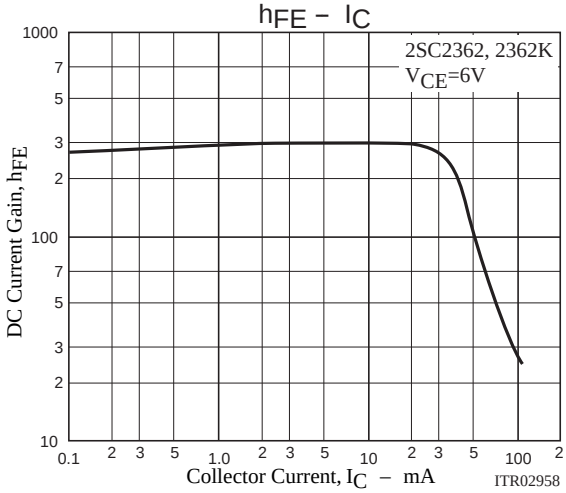




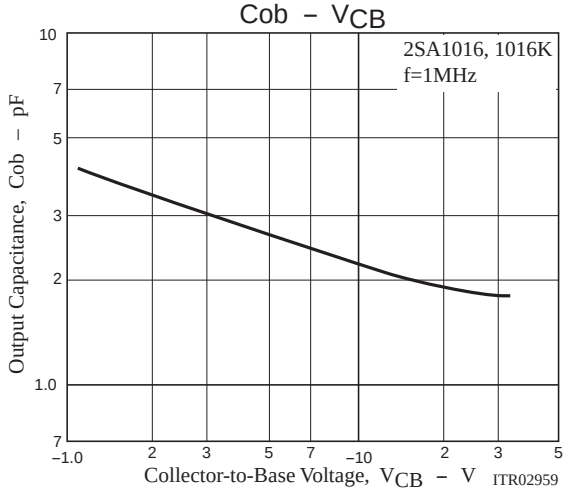
h_{FE} – I_C



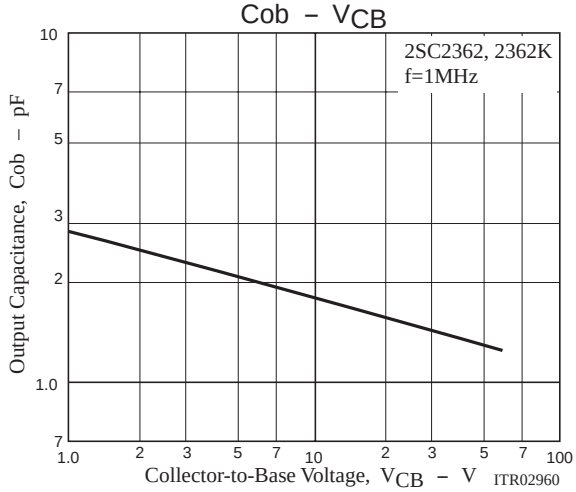
h_{FE} – I_C



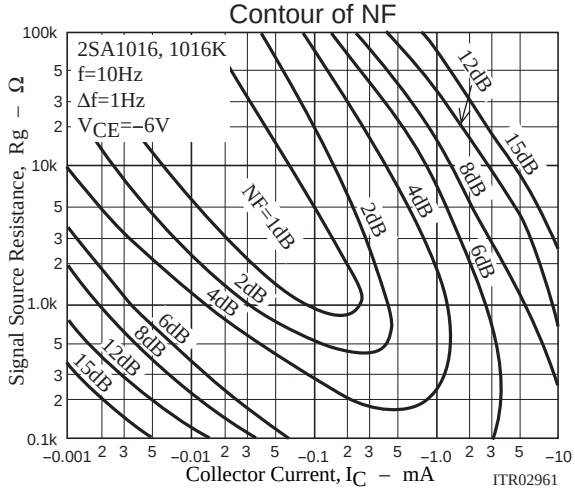
Cob – V_{CB}



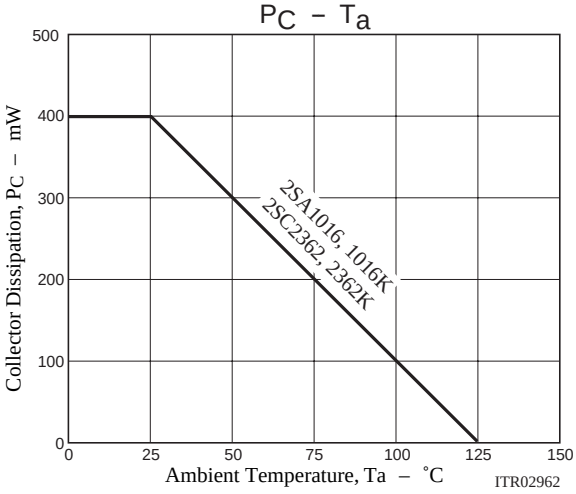
Cob – V_{CB}



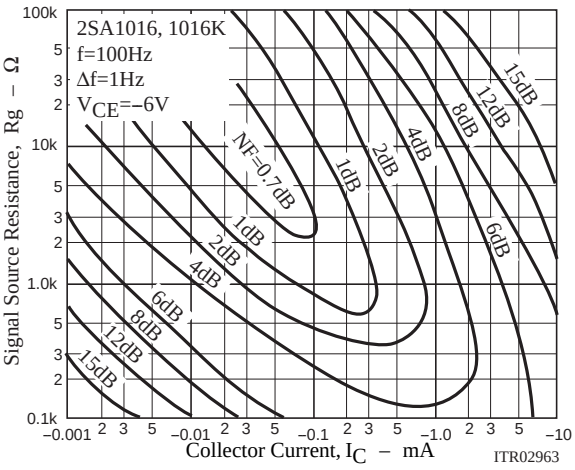
Contour of NF



P_C – T_a



Contour of NF



Contour of NF