



SANYO Semiconductors

DATA SHEET

2SA1016, 1016K 2SC2362, 2362K

PNP / NPN Epitaxial Planar Silicon Transistors
— **High-Voltage Low-Noise Amp Applications**

Specifications () : 2SA1016, 1016K

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	2SA1016, 2SC2362	2SA1016K, 2SC2362K	Unit
Collector-to-Base Voltage	V _{CB0}		(-)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	T _J			125	°C
Storage Temperature	T _{stg}			-55 to +125	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =(-)80V, I _E =0A			(-)1.0	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0A			(-)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
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 =0A [2SA1016, 2SC2362]	(-)120			V
		I _C =(-)10μA, I _E =0A [2SA1016K, 2SC2362K]	(-)150			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =(-)1mA, R _{BE} =∞ [2SA1016, 2SC2362]	(-)100			V
		I _C =(-)1mA, R _{BE} =∞ [2SA1016K, 2SC2362K]	(-)120			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)10μA, I _C =0A	(-)5			V

Continued on next page.

* : The 2SA1016, 1016K/2SC2362, 2362K are classified by 1mA h_{FE} as follows :

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

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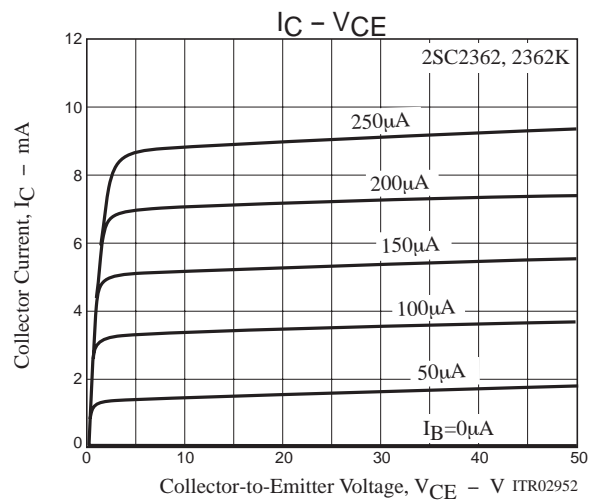
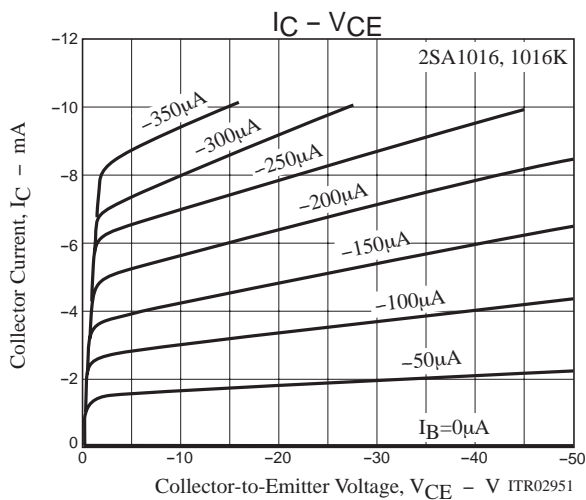
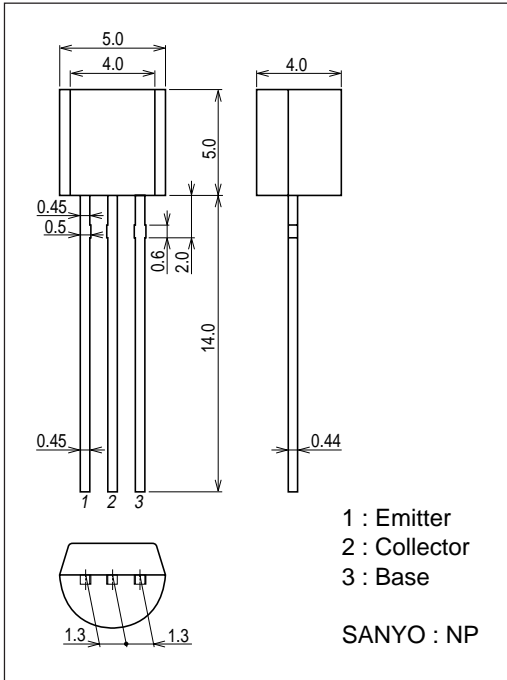
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Noise Level	VNO(ave)	V _{CC} =30V, I _C =1mA, R _g =56kΩ, V _G =77dB/1kHz			35	mV
Noise Peak Level	VNO(peak)	V _{CC} =30V, I _C =1mA, R _g =56kΩ, V _G =77dB/1kHz			200	mV

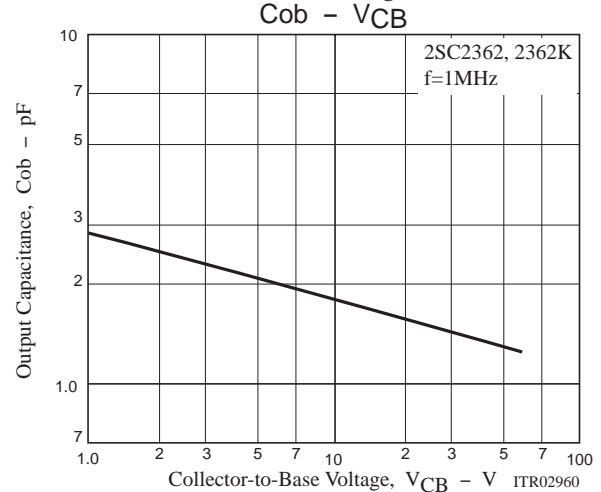
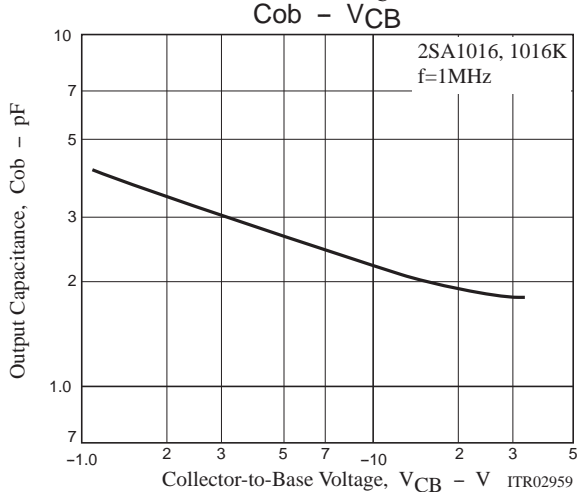
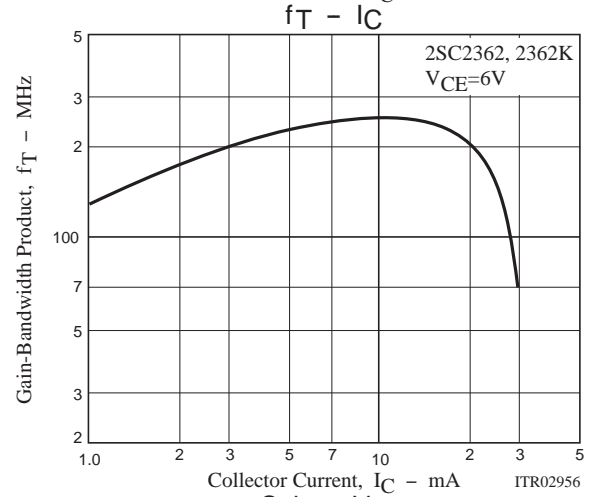
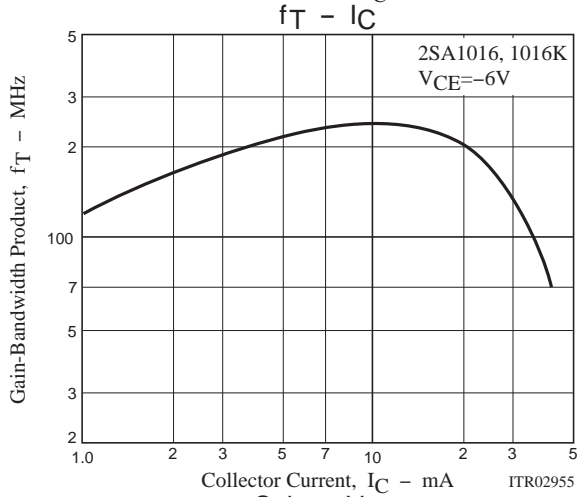
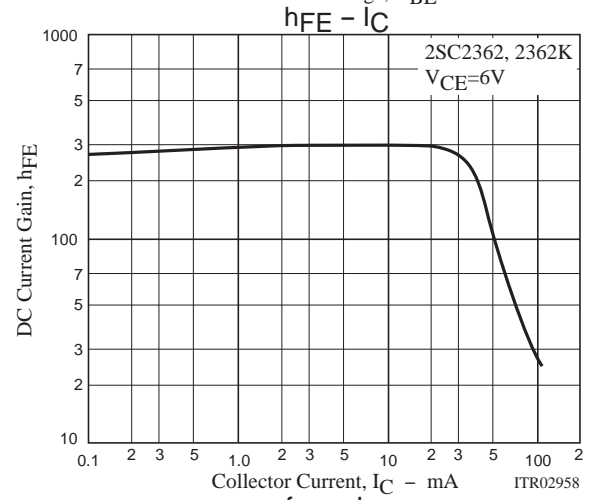
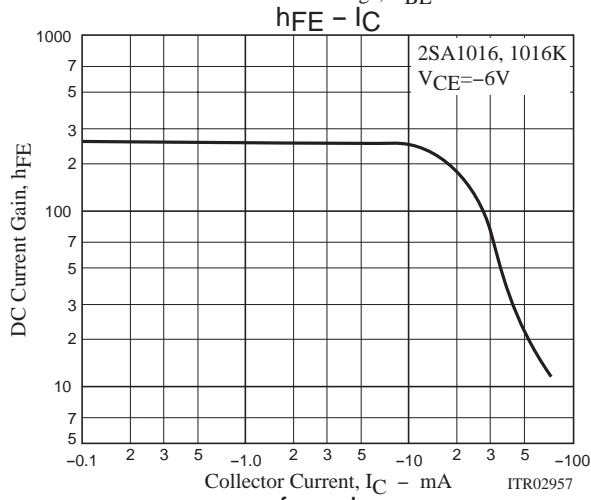
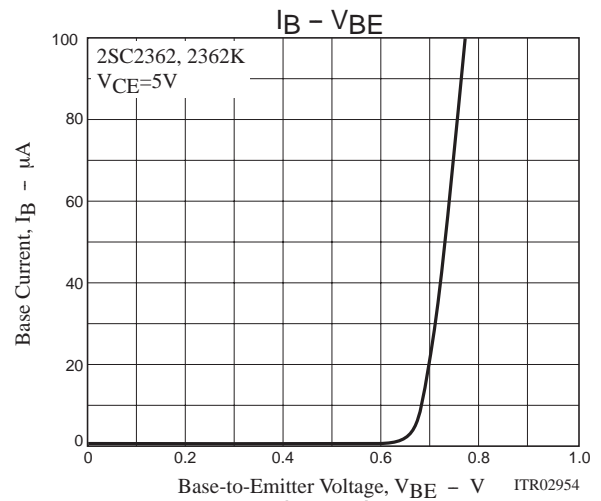
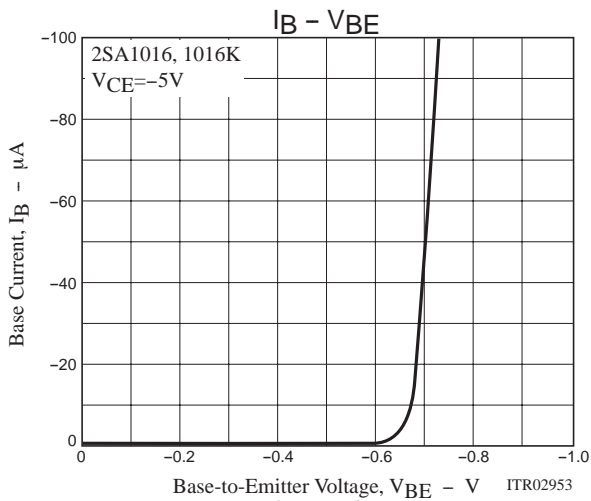
Package Dimensions

unit : mm (typ)

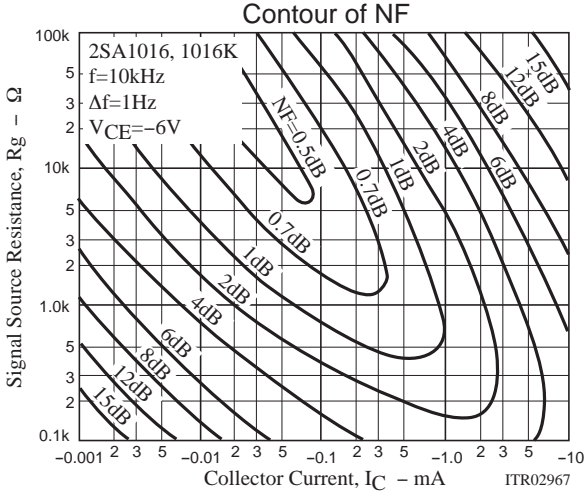
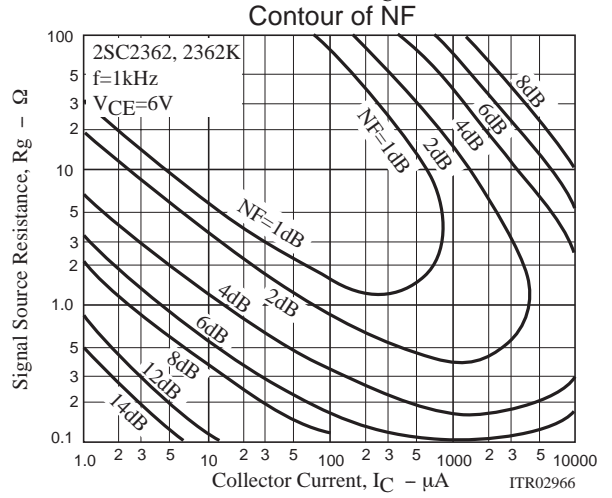
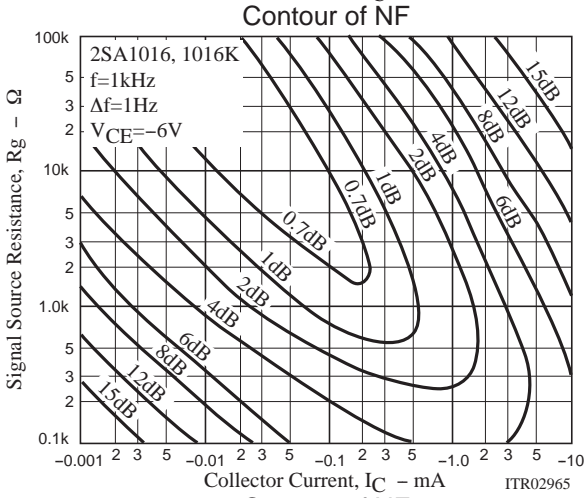
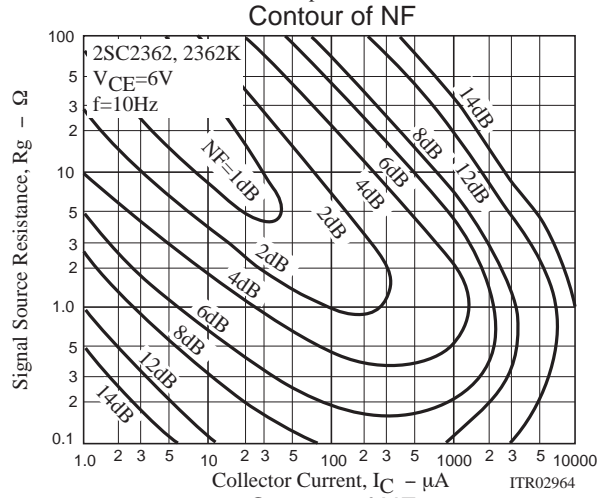
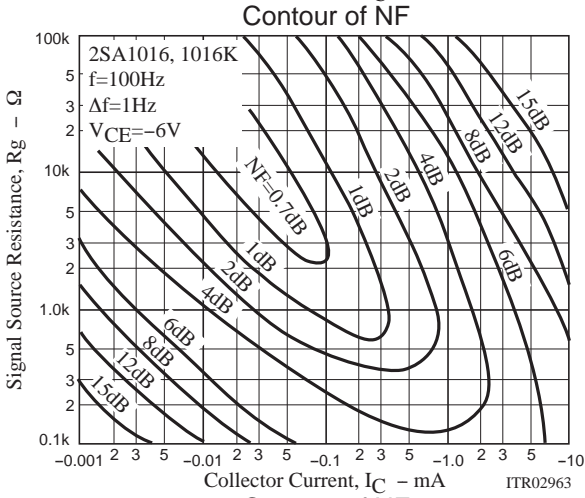
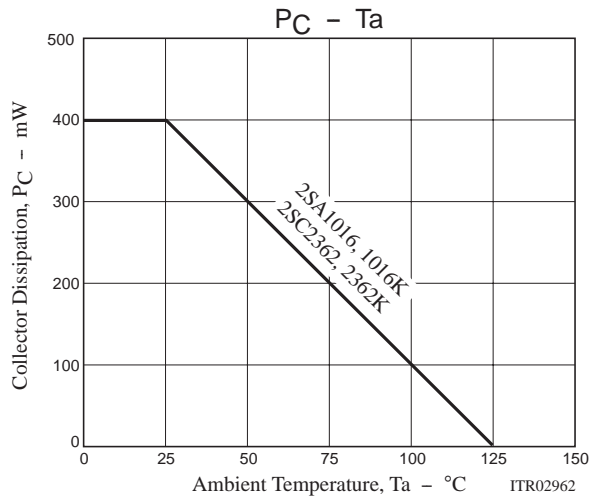
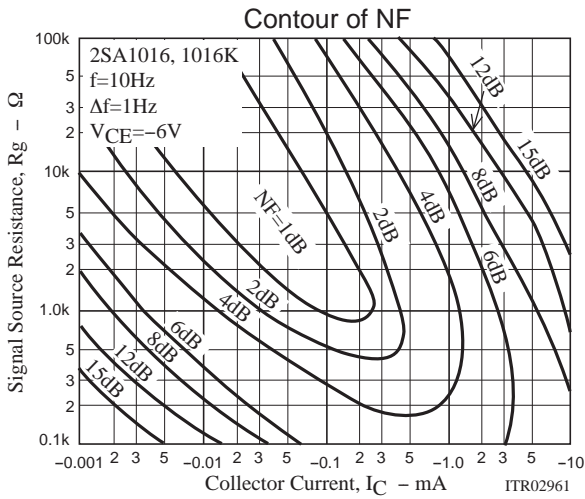
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