

SANYO	No.3217	2SA1331/2SC3361
PNP/NPN Epitaxial Planar Silicon Transistors		
High-Speed Switching Applications		

Features

- Fast switching speed
- High breakdown voltage
- Small-sized package permitting the 2SA1331/2SC3361-applied sets to be made small and slim

() : 2SA1331

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V _{CB0}	(-)60	V
Collector to Emitter Voltage	V _{CEO}	(-)50	V
Emitter to Base Voltage	V _{EBO}	(-)5	V
Collector Current	I _C	(-)150	mA
Collector Current(Pulse)	I _{CP}	(-)400	mA
Base Current	I _B	(-)40	mA
Collector Dissipation	P _C	150	mW
Junction Temperature	T _j	125	°C
Storage Temperature	T _{stg}	-55 to +125	°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} = (-)40V, I _E = 0			(-)0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = (-)4V, I _C = 0			(-)0.1	μA
DC Current Gain	h _{FE}	V _{CE} = (-)6V, I _C = (-)1mA	90*		400*	
Gain-Bandwidth Product	f _T	V _{CE} = (-)6V, I _C = (-)1mA		100		MHz
Output Capacitance	c _{ob}	V _{CB} = (-)6V, f = 1MHz		(3.5)2.7		pF
C-E Saturation Voltage	V _{CE(sat)}	I _C = (-)10mA, I _B = (-)1mA			(-)0.1 (-)0.4	V
B-E Saturation Voltage	V _{BE(sat)}	I _C = (-)10mA, I _B = (-)1mA			(-)0.75 (-)1.1	V
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = (-)10μA, I _E = 0	(-)60			V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = (-)1mA, R _{BE} = ∞	(-)50			V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = (-)10μA, I _C = 0	(-)5			V
Delay Time	t _d	See specified Test Circuit.		40		ns
Rise Time	t _r	∕		(120)80		ns
Storage Time	t _{stg}	∕		(190)230		ns
Fall Time	t _f	∕		(200)160		ns

* : The 2SA1331/2SC3361 are classified by 1mA h_{FE} as follows :

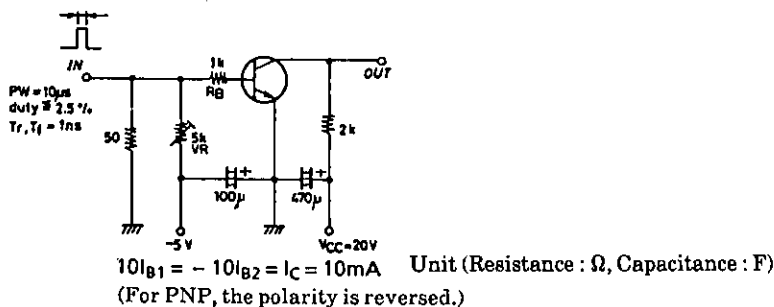
90	4	180	135	5	270	200	6	400
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Marking 2SA1331 : O

2SC3361 : S

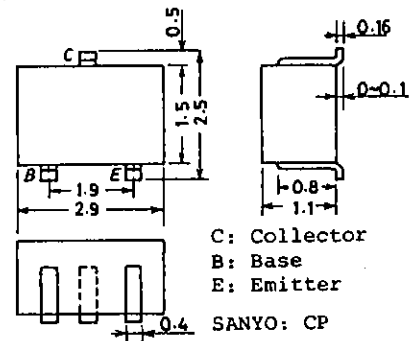
h_{FE} rank : 4,5,6

Switching Time Test Circuit

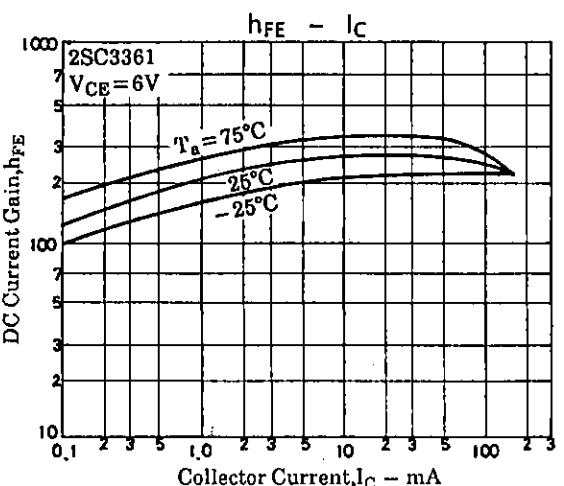
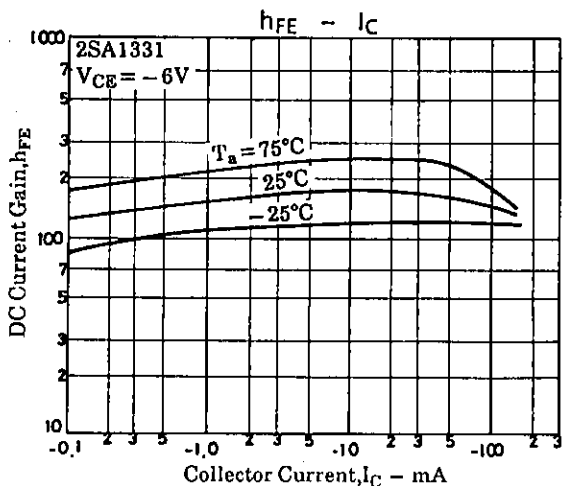
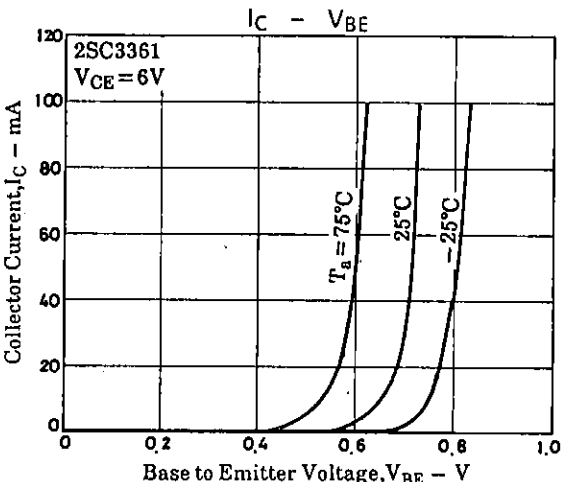
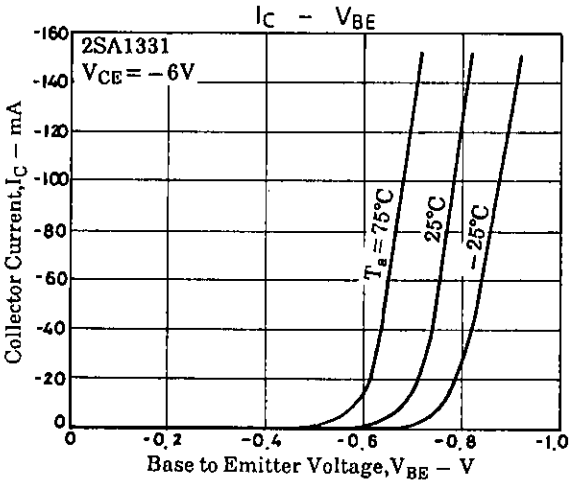
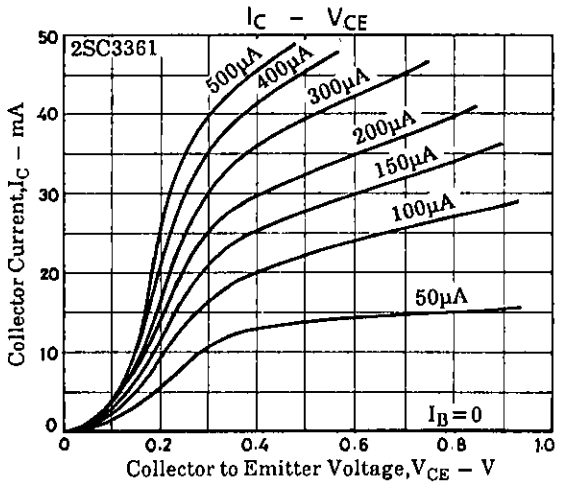
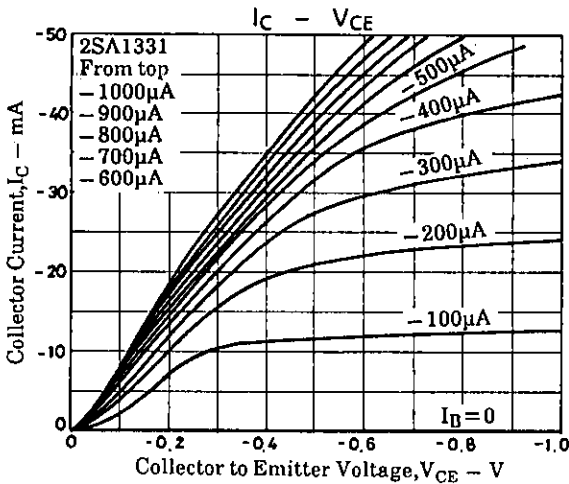
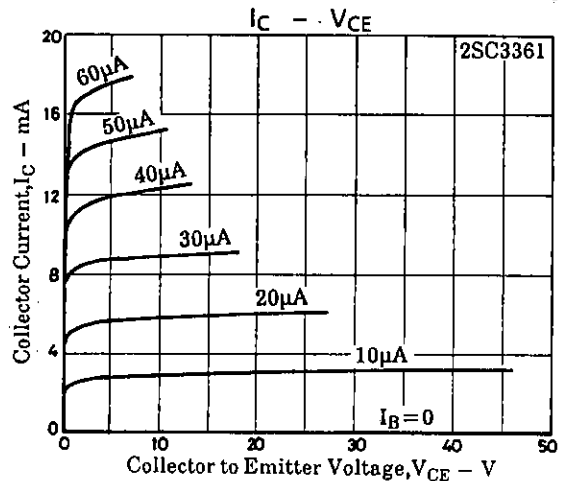
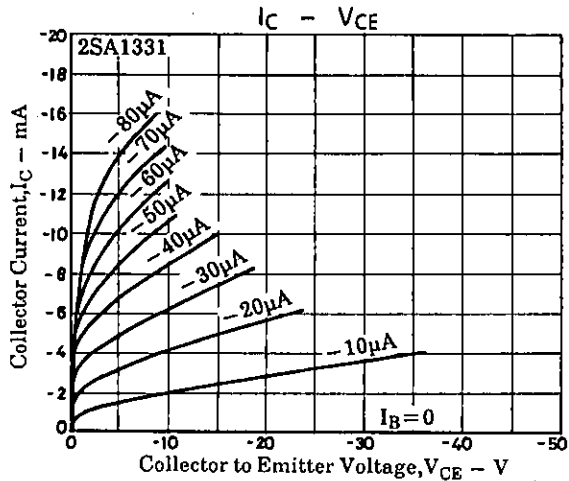


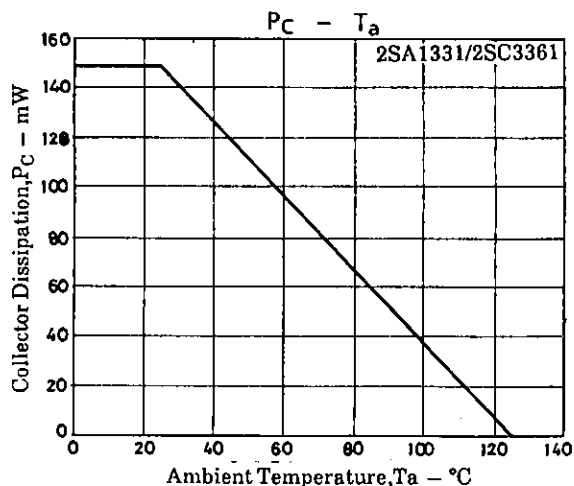
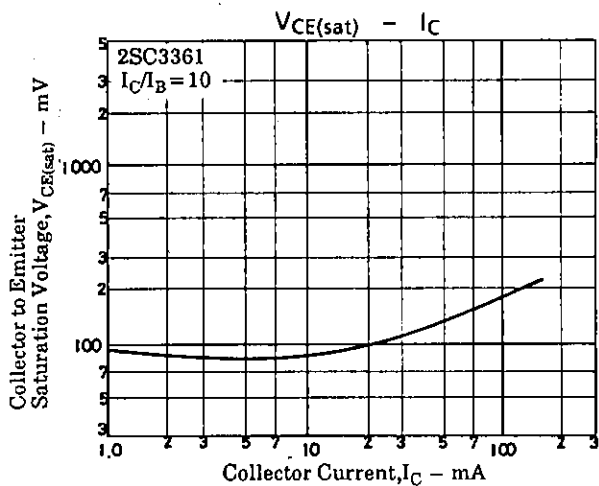
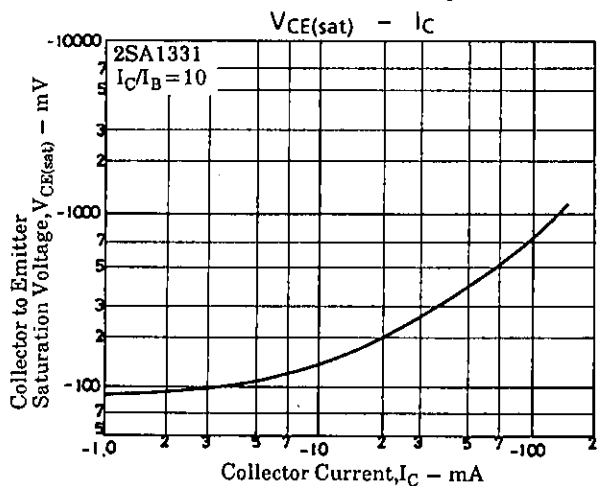
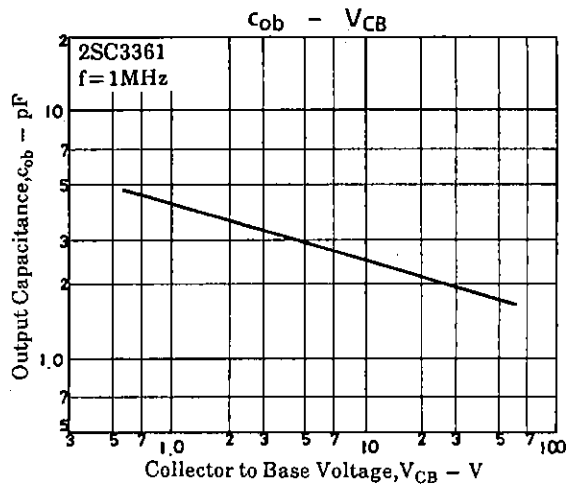
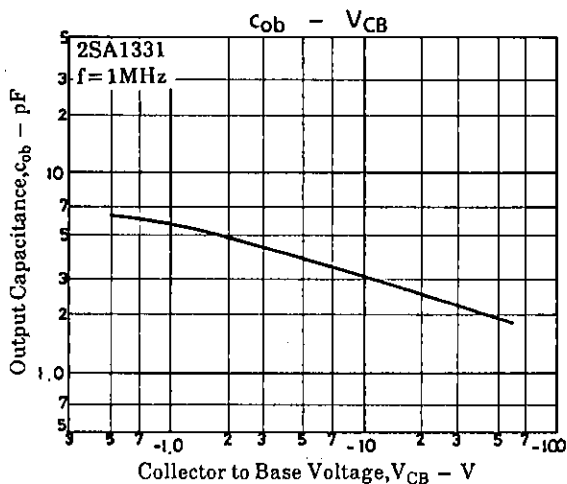
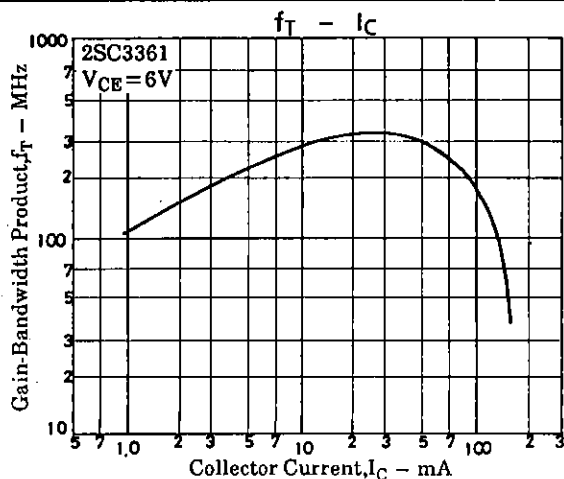
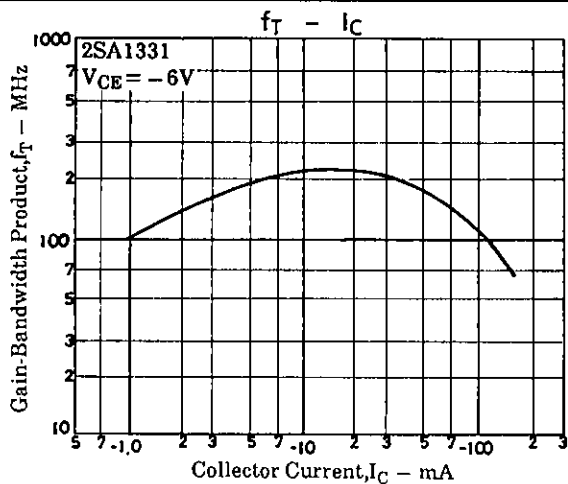
Package Dimensions 2018A

(unit : mm)



2SA1331/2SC3361





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