

SANYO

No.2545

2SA1604/2SC4156

PNP/NPN Epitaxial Planar Type
Silicon Transistors

HIGH-SPEED SWITCHING APPLICATIONS

Features

- . Adoption of FBET process
- . High breakdown voltage ($V_{CEO} = (-)50V$)
- . Large current capacity and high f_T
- . Small-sized package (DP6) permitting sets to be made smaller and slimmer

(): 2SA1604

Absolute Maximum Ratings at $T_a = 25^\circ C$

			unit
Collector to Base Voltage	V_{CBO}	(-)60	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)500	mA
Peak Collector Current	i_{cp}	(-)800	mA
Collector Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

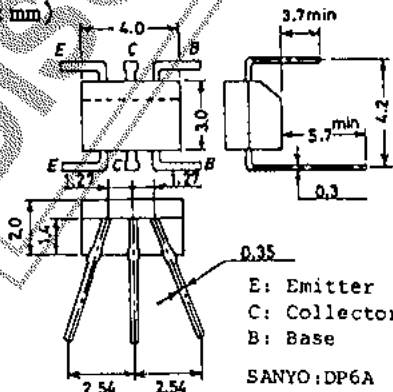
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)5V, I_C = (-)10mA$	100*		560*	
DC Current Gain Ratio	h_{FE}	$V_{CE} = (-)5V, I_C = (-)10mA$	0.8		1.0	
Base to Emitter Voltage Difference	V_{BE}	$V_{CE} = (-)5V, I_C = (-)10mA$		1.0	10	mV
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)50mA$		300		MHz
				(200)		MHz
Output Capacitance	C_{ob}	$V_{CB} = (-)10V, f = 1MHz$		3.7		pF
				(5.6)		pF

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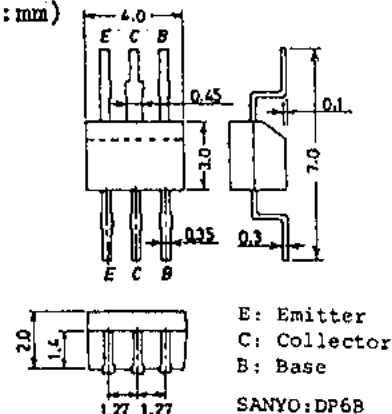
*: The 2SA1604/2SC4156 are classified by 10mA h_{FE} (small) as follows:

100	R	200	140	S	280	200	T	400	280	U	560
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Case Outline 2029A
(unit: mm)



Case Outline 2030A
(unit: mm)



Specifications and information hereof are subject to change without notice.

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			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-) 100mA, I_B = (-) 10mA$		0.1	0.3	V
				(0.15)	(0.4)	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-) 100mA, I_B = (-) 10mA$		0.8	1.2	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-) 10\mu A, I_E = 0$	(-)60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 100\mu A, R_{BE} = \infty$	(-)50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-) 10\mu A, I_C = 0$	(-)5			V

The application circuit diagrams and circuit constants herein are included as an example and provide no guarantee for designing equipment to be mass-produced.
The information herein is believed to be accurate and reliable. However, no responsibility is assumed by SANYO for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

DISCONTINUED PRODUCT