

2029A

PNP Epitaxial Planar
Silicon Composite Transistor

T-29-27

Differential Amp Applications

©957C

Applications

- Differential amp, current mirror, temperature compensator.

Features

- Excellent in thermal equilibrium and suited for use in differential amp applications.
- Matched pair capability.

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

			unit
Collector to Base Voltage	V_{CB0}	-55	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-150	mA
Peak Collector Current	i_{cp}	-300	mA
Collector Dissipation	P_C	200	mW
Total Dissipation	P_T	400	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

1 unit

Electrical Characteristics at $T_a=25^\circ\text{C}$

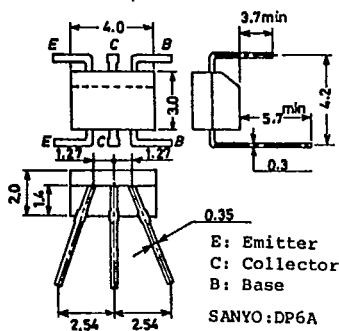
			min	typ	max	unit
Collector Cutoff Current	I_{CB0}	$V_{CB}=-35\text{V}, I_E=0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-6\text{V}, I_C=-1\text{mA}$	100*		560*	
DC Current Gain Ratio	$h_{FE(\text{small}/\text{large})}$	$V_{CE}=-6\text{V}, I_C=-1\text{mA}$	0.85	0.98		

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*The 2SA1237 is classified by h_{FE} (small) as follows:

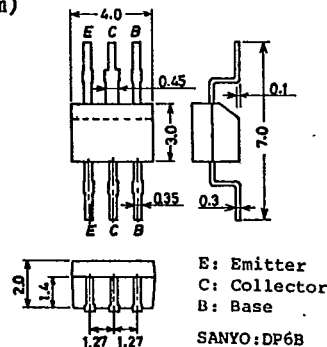
100	E	200	160	F	320	280	G	560
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Case Outline 2029A
(unit:mm)



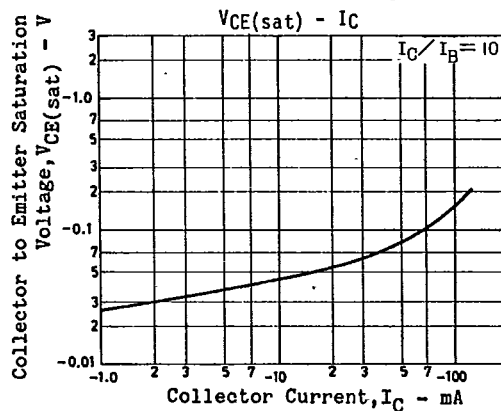
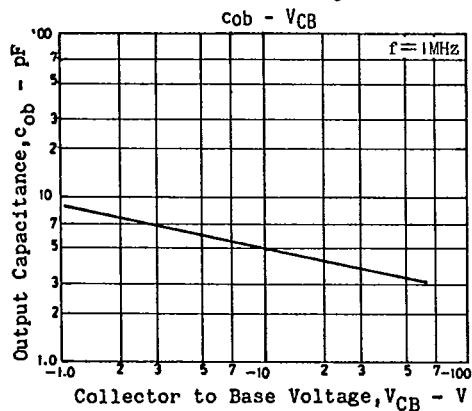
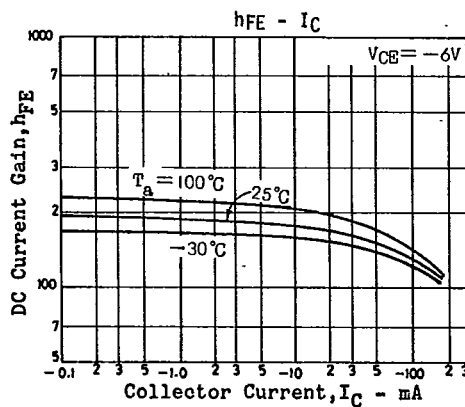
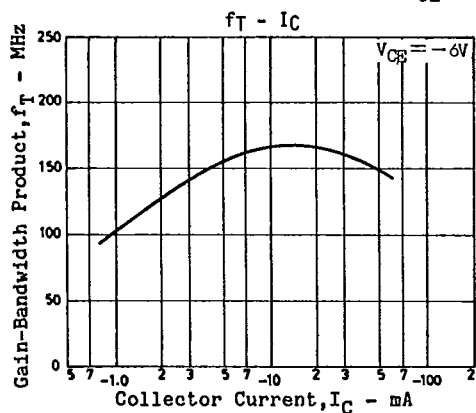
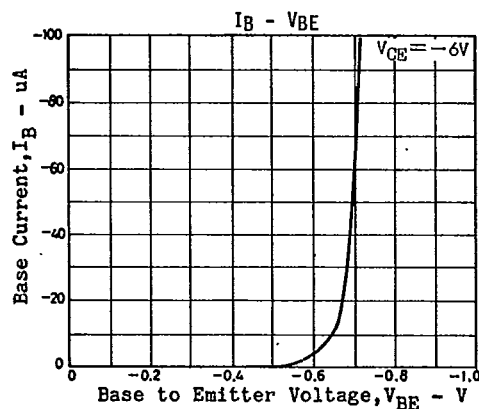
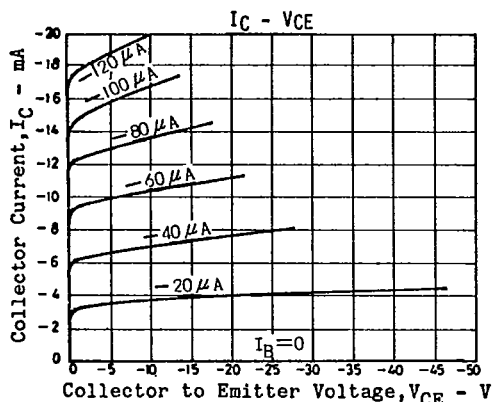
The 2SA1237 is provided with a surface mounted package.

Case Outline 2030A
(unit:mm)



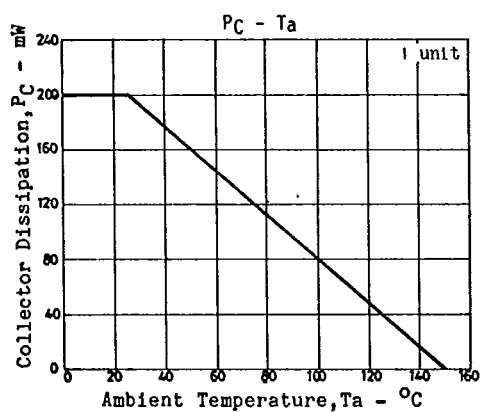
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			min	typ	max	unit
Base to Emitter Voltage Drop	$V_{BE(\text{large-small})}$	$V_{CE}=-6V, I_C=-1mA$		1.0	10	mV
Collector to Emitter Saturation Voltage	$V_{CE(\text{sat})}$	$I_C=-50mA, I_B=-5mA$			-0.5	V
Gain-Bandwidth Product	f_T	$V_{CE}=-6V, I_C=-1mA$		100		MHz
Output Capacitance	c_{ob}	$V_{CB}=-10V, f=1MHz$		5.0		pF
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10uA, I_E=0$	-55			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	-50			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10uA, I_C=0$	-5			V



2SA1237

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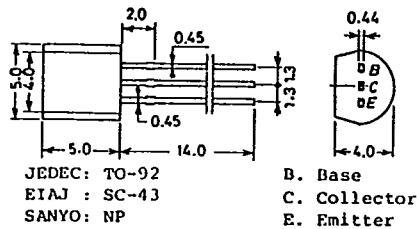


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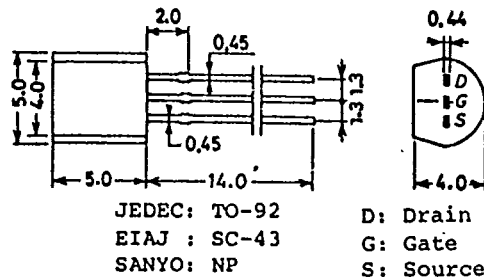
CASE OUTLINES OF LEAD FORMED SMALL SIGNAL TRANSISTORS

- All of Sanyo lead formed small signal transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.

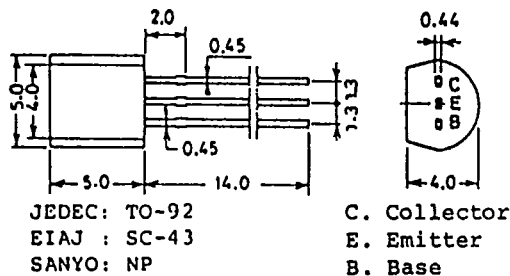
Case Outline—[2003A] unit: mm



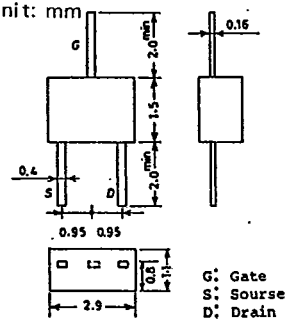
Case Outline—[2019A] unit: mm



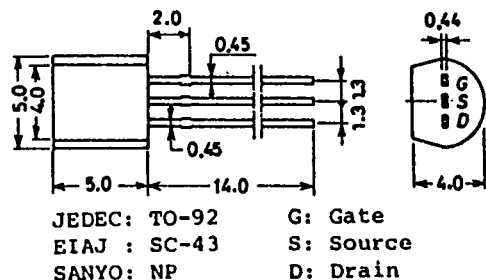
Case Outline—[2004A] unit: mm



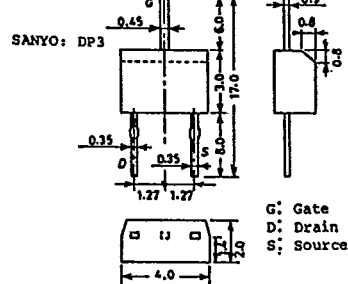
Case Outline—[2025] unit: mm



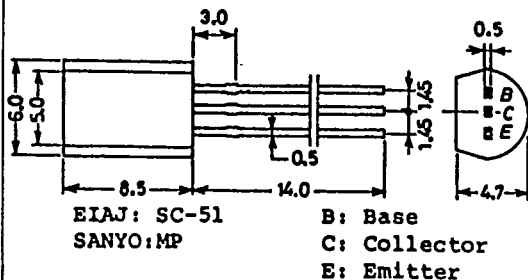
Case Outline—[2005A] unit: mm



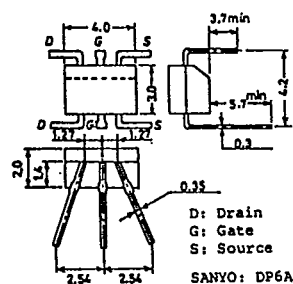
Case Outline—[2026] unit: mm



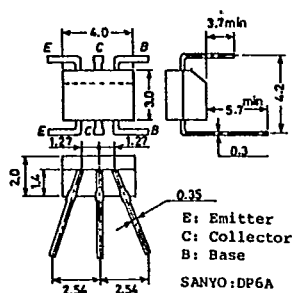
Case Outline—[2006A] unit: mm



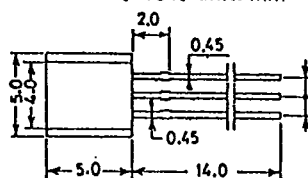
Case Outline—[2027A] unit: mm



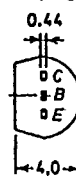
Case Outline—[2029A] unit: mm



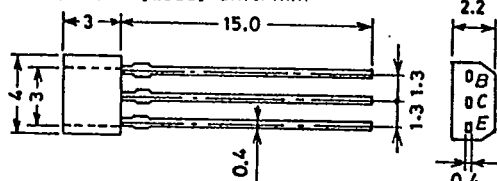
Case Outline—[2061] unit: mm



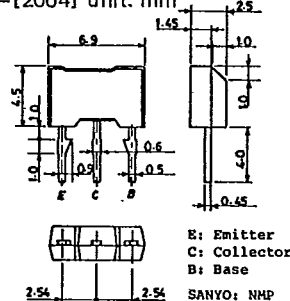
T-91-20



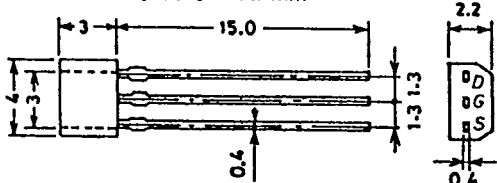
Case Outline—[2033] unit: mm



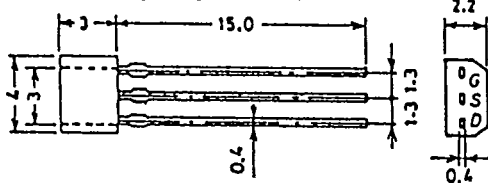
Case Outline—[2064] unit: mm



Case Outline—[2034] unit: mm



Case Outline—[2040] unit: mm



Case Outline—[2051] unit: mm

