

2033



2003A

PNP Epitaxial Planar Silicon Transistors

T-27-15

# General-Purpose Amp, Switching Applications

©334 I

## Features

- The 2SA608 is classified into 2 types of SP, NP according to the case outline.
- The NP type is subclassified into 2 subtypes according to the breakdown voltage.
- The 2SC536 is available as an NPN type version of the 2SA608.

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

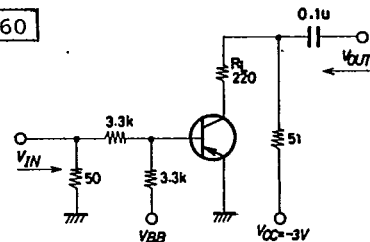
	2SA608SPA	2SA608NP	2SA608KNP	unit	
Collector to Base Voltage	$V_{CB0}$	-40	-40	-55	V
Collector to Emitter Voltage	$V_{CE0}$	-30	-30	-50	V
Emitter to Base Voltage	$V_{EB0}$	-5	-5	-5	V
Collector Current	$I_C$	-100	-100	-100	mA
Peak Collector Current	$i_{cp}$	300	300	300	mA
Collector Dissipation	$P_C$	300	400	400	mW
Junction Temperature	$T_j$	125	125	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +125	-55 to +125	-55 to +125	$^\circ\text{C}$

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

		min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=-25V, I_E=0$		-1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=-4V, I_C=0$		-1	$\mu\text{A}$
DC current Gain	$h_{FE}$	$V_{CE}=-6V, I_C=-1\text{mA}$	60*	150	560*
Gain-Bandwidth Product	$f_T$	$V_{CE}=-6V, I_C=-10\text{mA}$		180	MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-6V, f=1\text{MHz}$		7	pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$		-0.5	V
Turn-On Time	$t_{on}$	$V_{IN}=-12V, V_{BB}=+3V$ , at appointed circuit.		50	ns
Turn-Off Time	$t_{off}$	$V_{IN}=+12V, V_{BB}=-4V$ , at appointed circuit.		210	ns

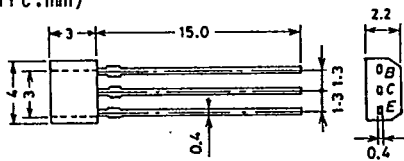
\*2SA608 is graded as follows by  $h_{FE}$  at 1mA:

60	D	120	100	E	200	160	F	320	280	G	560
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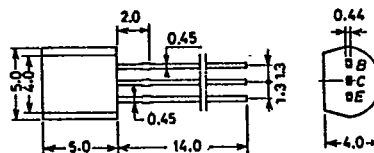
Switching Time Test Circuit

Case Outline 2033 (unit:mm)



B: Base  
C: Collector  
E: Emitter  
SANYO: SPA

Case Outline 2003A (unit:mm)



JEDEC: TO-92  
EIAJ: SC-43  
SANYO: NP  
B. Base  
C. Collector  
E. Emitter

The 2SA608, 608K are scheduled to be discontinued soon. Use the 2SA1782, 1783, instead of the 2SA608, 608K, in new applications where you are planning to use the 2SA608, 608K.

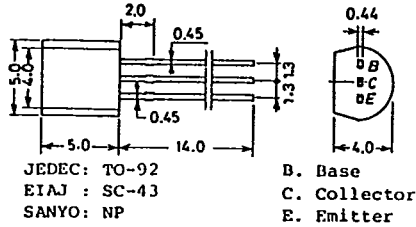
3177KI/3075KI/6162KI, TS No. 334-1/2

T-91-20

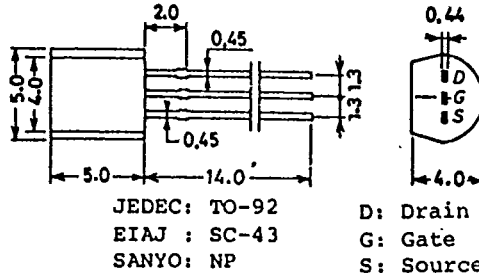
# CASE OUTLINES OF LEAD FORMED SMALL SIGNAL TRANSISTORS

- 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.

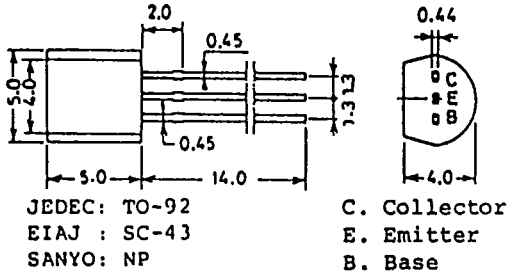
Case Outline-[2003A] unit: mm



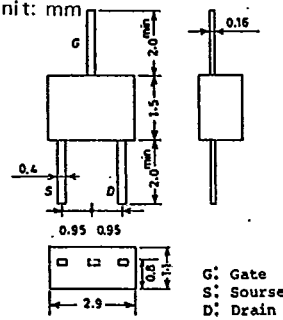
Case Outline-[2019A] unit: mm



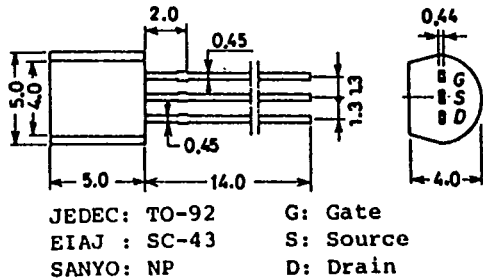
Case Outline-[2004A] unit: mm



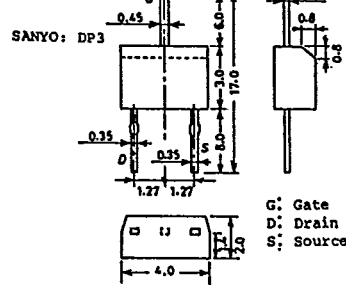
Case Outline-[2025] unit: mm



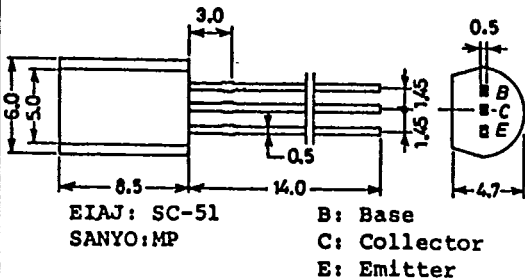
Case Outline-[2005A] unit: mm



Case Outline-[2026] unit: mm



Case Outline-[2006A] unit: mm



Case Outline-[2027A] unit: mm

