

T-27-15



2033

2003A

PNP Epitaxial Planar Silicon Transistors

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 $T_a=25^\circ\text{C}$

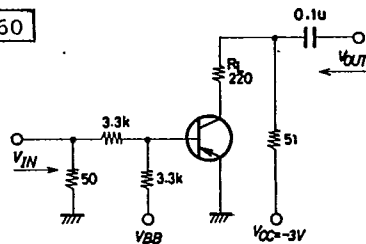
		2SA608SPA	2SA608NP	2SA608KNP	unit
Collector to Base Voltage	V_{CB0}	-40	-40	-55	V
Collector to Emitter Voltage	V_{CE0}	-30	-30	-50	V
Emitter to Base Voltage	V_{EB0}	-5	-5	-5	V
Collector Current	I_C	-100	-100	-100	mA
Peak Collector Current	i_{cp}	300	300	300	mA
Collector Dissipation	P_C	300	400	400	mW
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}	$V_{CB}=-25\text{V}, I_E=0$			-1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			-1	μA
DC current Gain	h_{FE}	$V_{CE}=-6\text{V}, I_C=-1\text{mA}$	60*	150	560*	
Gain-Bandwidth Product	f_T	$V_{CE}=-6\text{V}, I_C=-10\text{mA}$		180		MHz
Output Capacitance	c_{ob}	$V_{CB}=-6\text{V}, f=1\text{MHz}$		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}	$V_{IN}=-12\text{V}, V_{BB}=+3\text{V}$, at appointed circuit.		50		ns
Turn-Off Time	t_{off}	$V_{IN}=+12\text{V}, V_{BB}=-4\text{V}$, at appointed circuit.		210		ns

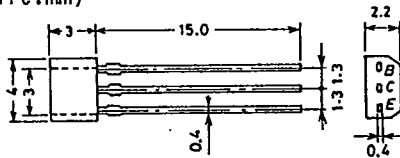
*2SA608 is graded as follows by h_{FE} at 1mA:

60	D	120	100	E	200	160	F	320	280	G	560
----	---	-----	-----	---	-----	-----	---	-----	-----	---	-----



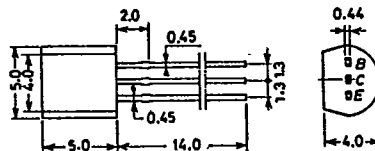
Switching Time Test Circuit

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.

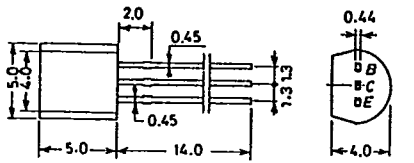
3177KI/3075KI/6162KI, TS No. 334-1/2

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.

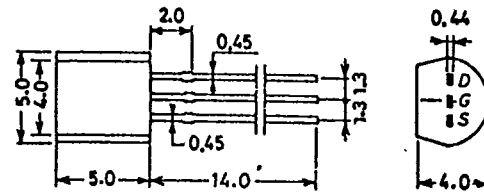
Case Outline-[2003A] unit: mm



JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

B. Base
C. Collector
E. Emitter

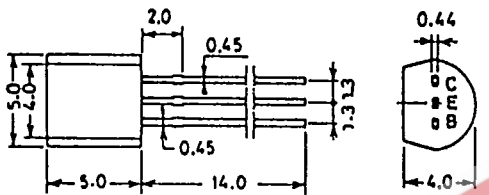
Case Outline-[2019A] unit: mm



JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

D: Drain
G: Gate
S: Source

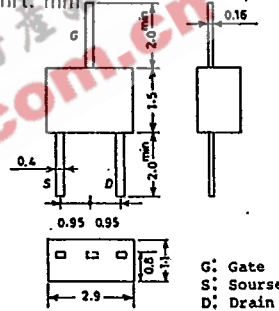
Case Outline-[2004A] unit: mm



JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

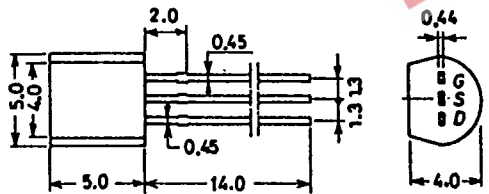
C. Collector
E. Emitter
B. Base

Case Outline-[2025] unit: mm



G: Gate
S: Source
D: Drain

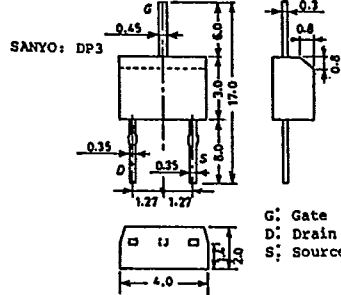
Case Outline-[2005A] unit: mm



JEDEC: TO-92
EIAJ: SC-43
SANYO: NP

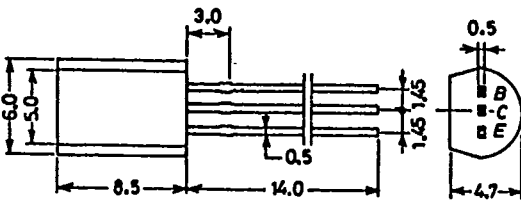
G: Gate
S: Source
D: Drain

Case Outline-[2026] unit: mm



G: Gate
D: Drain
S: Source

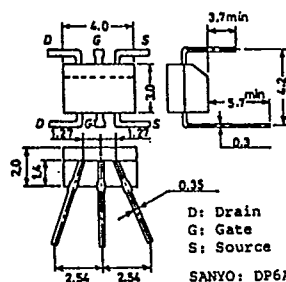
Case Outline-[2006A] unit: mm



EIAJ: SC-51
SANYO: MP

B: Base
C: Collector
E: Emitter

Case Outline-[2027A] unit: mm



D: Drain
G: Gate
S: Source
SANYO: DP6A

