Ordering number: EN 2973

SANYO

No.2973

2SA1699

PNP Epitaxial Planar Silicon Transistor

High-Voltage Driver Applications

Features

- High breakdown voltage
- Adoption of MBIT process
- Excellent h_{FE} linearity

Absolute Maximum Ratings at Ta = 25°C

			unit
Collector to Base Voltage	V_{CBO}	−400	V
Collector to Emitter Voltage	V_{CEO}	−400	V
Emitter to Base Voltage	V_{EBO}	−5	V
Collector Current	I_C	−200	mA
Collector Current(Pulse)	I_{CP}	−400	mA
Collector Dissipation	P_C	600	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	−55 to +150	°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=-300V, I_E=0$			−0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4V, I_C=0$			−0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-10V, I_C=-50mA$	60※		200※	
Gain-Bandwidth Product	f_T	$V_{CE}=-30V, I_C=-10mA$		70		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C=-50mA, I_B=-5mA$			−0.8	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C=-50mA, I_B=-5mA$			−1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	−400			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	−400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	−5			V

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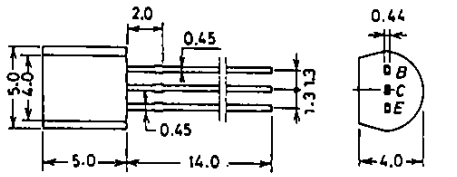
※ : The 2SA1699 is classified by 50mA h_{FE} as follows :

60 D 120	100 E 200

Package Dimensions 2003A
(unit: mm)



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

B. Base
C. Collector
E. Emitter

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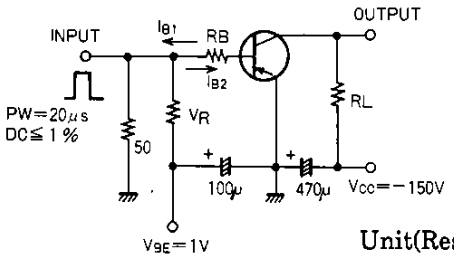
Continued from preceding page.

			min	typ	max	unit
Output Capacitance	c_{ob}	$V_{CB}=-30V, f=1MHz$		5		pF
Reverse Transfer Capacitance	c_{re}	$V_{CB}=-30V, f=1MHz$		4		pF
Turn-ON Time	t_{on}	See specified Test Circuit.		0.25		μs
Turn-OFF Time	t_{off}			5		μs

Switching Time Test Circuit



Unit(Resistance : Ω , Capacitance : F)

$-10I_{B1}=10I_{B2}=I_C=-50mA$
$R_L=3k\Omega$, $R_B=200\Omega$ at $I_C=-50mA$