PNP/NPN Epitaxial Planar Silicon Transistors



2SA1520/2SC3914

Switching Applications (with Bias Resistance)

Applications

· Switching circuits, inverter circuits, interface circuits, driver circuits.

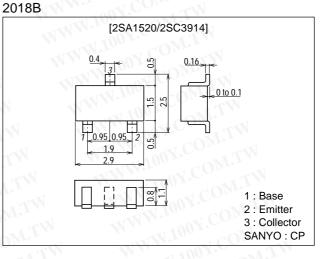
Features

- · On-chip bias resistance : $R1=2.2k\Omega$, $R2=10k\Omega$
- · Small-sized package : CP.
- · Large current capacity : $I_C = 500 \text{mA}$.

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Package Dimensions

unit:mm



(): 2SA1520 **Specifications**

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO	NM. ONCONTRA AN	(–)50	V
Collector-to-Emitter Voltage	VCEO	WW.IOOM.	(–)50	V
Emitter-to-Base Voltage	VEBO	TIODY TO THE	(–)6	V
Collector Current	IC	WWW. NOV.COM TW V	(–)500	mA
Collector Current (Pulse)	I _{CP}	W.100 COM	(–)800	mA
Collector Dissipation	PC	WWW. JOOY. C. TW	200	mW
Junction Temperature	Tj	WWW. LOW COMMENT	150	°C
Storage Temperature	Tstg	W. LOUI COM.	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions		Unit		
	Symbol		min	typ	max	Unit
Collector Cutoff Current	ICBO	V _{CB} =(-)40V, I _E =0			(–)0.1	μA
Collector Catoli Carrent	ICEO	V _{CE} =(-)40V, I _B =0			(–)0.5	μA
Emitter Cutoff Current	IEBO	V _{EB} =(-)5V, I _C =0	(–)315	(–)410	(–)590	μA
DC Current Gain	hFE	V _{CE} =(-)5V, I _C =(-)10mA	50		NT.	700
Gain-Bandwidth Product	N	V _{CE} =(-)10V, I _C =(-)5mA		250		MHz
	0 1 T		N.	(200)	WAR	MHz
	001.	1 M M M 1001. AN		Contin	ued on n	ext pag

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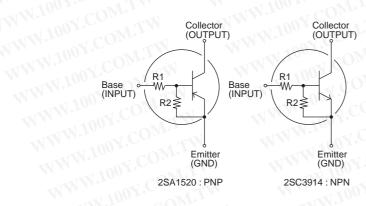
SANYO Electric Co., Ltd. Semiconductor Company TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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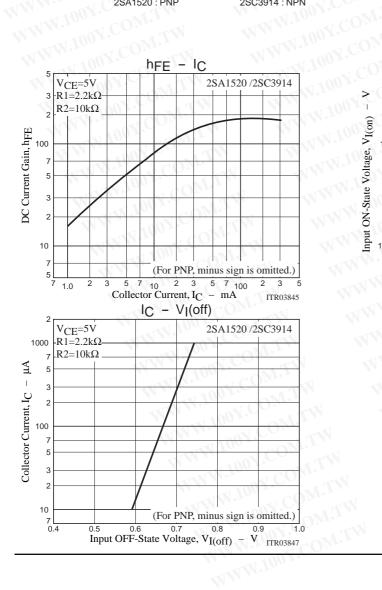
Parameter	Symbol	Conditions	Ratings			Uni
	Cymbol		min	typ	max	0.
Output Capacitance		V _{CB} =(-)10V, f=1MHz	1	3.7		pl
Output Capacitance	C _{ob}	VCB=(-)100, I=100		(5.5)		pl
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =(-)50mA, I _B =(-)2.5mA	N .	(–)0.1	(–)0.3	V
Collector-to-Base Breakdown Voltage	V _(BR) CBO	I _C =(-)10µA, I _E =0	(–)50			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =(−)100µA, R _{BE} =∞	(–)50			٧
Input OFF-State Voltage	VI(off)	V _{CE} =(-)5V, I _C =(-)100µA	(-)0.5	(-)0.67	(–)0.9	V
Input ON-State Voltage	V _{I(on)}	V _{CE} =(-)0.2V, I _C =(-)50mA	(-)0.7	(–)1.6	(–)3.0	\
Input Resistance	R1	TW WWW. ONY.CO.	1.5	2.2	2.9	k۵
Resistance Ratio	R1/R2		0.198	0.22	0.242	

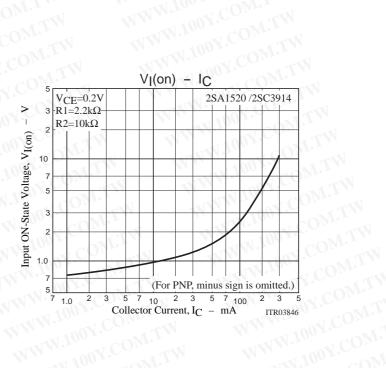
Electrical Connection WWW.100Y



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