Ordering number: EN 2163A

SANYO

No.2163A

2SA1523/2SC3917

PNP/ NPN Epitaxial Planar Silicon Transistors

Switching Applications (with Bias Resistance)

Applications

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

Features

. On-chip bias resistance (R_1=4.7kΩ, R_2=4.7kΩ)
. Small-sized package (SPA)
. Large current capacity (I_C=500mA)

( ): 2SA1523

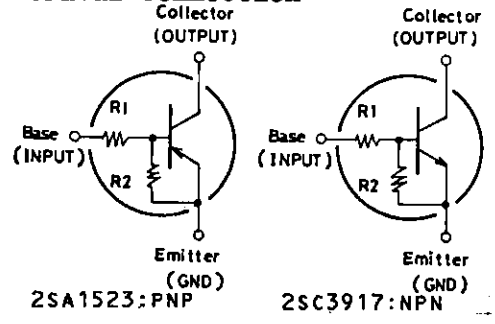
Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	(-)50	V
Collector to Emitter Voltage	V_{CEO}	(-)50	V
Emitter to Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)500	mA
Collector Current (Pulse)	I_{CP}	(-)800	mA
Collector Dissipation	P_C	300	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

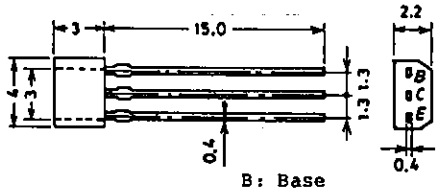
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)40V, I_E=0			(-)0.1	μA
	I_{CEO}	V_{CE}=(-)40V, I_B=0			(-)0.5	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)5V, I_C=0	(-)410	(-)532	(-)760	μA
DC Current Gain	h_{FE}	V_{CE}=(-)5V, I_C=(-)20mA	50			
Gain-Bandwidth Product	f_T	V_{CE}=(-)10V, I_C=(-)5mA		250		MHz
				(200)		MHz
Output Capacitance	C_{ob}	V_{CB}=(-)10V, f=1MHz		3.7		pF
				(5.5)		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=(-)40mA, I_B=(-)2mA		(-)0.1	(-)0.3	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)10μA, I_E=0	(-)50			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)100μA, R_{BE}=∞	(-)50			V
Input OFF-State Voltage	$V_{I(off)}$	V_{CE}=(-)5V, I_C=(-)100μA	(-)0.8	(-)1.1	(-)1.5	V
Input ON-State Voltage	$V_{I(on)}$	V_{CE}=(-)0.2V, I_C=(-)20mA	(-)1.0	(-)1.9	(-)4.0	V
Input Resistance	R_1		3.3	4.7	6.1	kΩ
Resistance Ratio	R_1/R_2		0.9	1.0	1.1	

Electrical Connection



Package Dimensions 2033
(unit: mm)



B: Base
C: Collector
E: Emitter

SANYO: SPA

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