Ordering number:EN2162A

PNP/NPN Epitaxial Planar Silicon Transistors

2SA1522/2SC3916

Switching Applications (with Bias Resistance)

Applications

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

Features

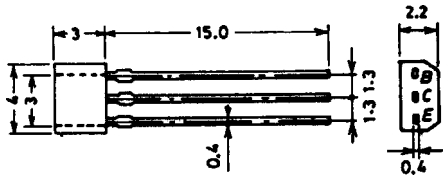
· On-chip bias resistance : R1=10kΩ, R2=10kΩ.
· Small-sized package : SPA.
· Large current capacity : I_C=500mA.

Package Dimensions

unit:mm

2033

[2SA1522/2SC3916]



B : Base
C : Collector
E : Emitter

SANYO : SPA

( ) : 2SA1522

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)50	V
Collector-to-Emitter Voltage	V_{CEO}		(–)50	V
Emitter-to-Base Voltage	V_{EBO}		(–)10	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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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	(–)195	(–)250	(–)360	μA
DC Current Gain	h_{FE}	V_{CE}=(–)5V, I_C=(–)10mA	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
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=(–)20mA, I_B=(–)1mA		(–)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			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=(–)10mA	(–)1.0	(–)2.0	(–)4.0	V
Input Resistance	R1		7	10	13	kΩ
Resistance Ratio	R1/R2		0.9	1.0	1.1	

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Electrical Connection