



Micro Commercial Components

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 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

**2SA933AS-Q**  
**2SA933AS-R**  
**2SA933AS-S**

**Features**

- Lead Free Finish/Rohs Compliant ("P" Suffix designates Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1
- Marking: type number
- Power dissipation:  $P_{CM} = 0.2W(T_{amb}=25^{\circ}C)$
- Collector current:  $I_{CM} = -0.15A$
- Collector-base voltage:  $V_{(BR)CBO} = -60V$
- Operating and storage junction temperature range  
 $T_J, T_{stg}: -55^{\circ}C$  to  $+150^{\circ}C$

**PNP**  
**Plastic-Encapsulate**  
**Transistors**

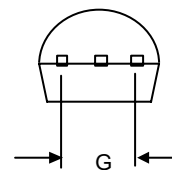
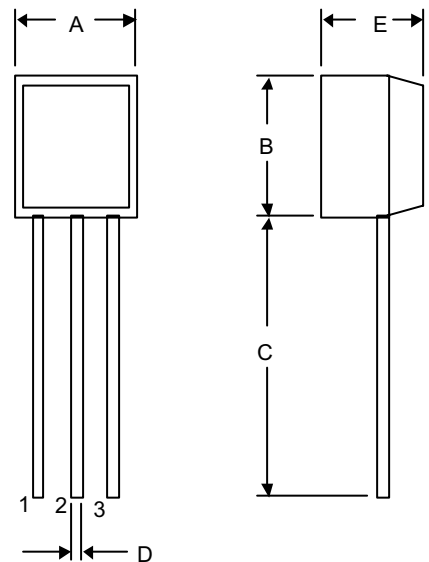
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Symbol	Parameter	Min	Typ	Max	Unit
$V_{CEO}$	Collector-Emitter Voltage ( $I_C = -50 \mu A, I_E = 0$ )	-50	---	---	V
$V_{CBO}$	Collector-Base Voltage ( $I_C = -1 \mu A, I_E = 0$ )	-60	---	---	V
$V_{EBO}$	Emitter-Base Voltage ( $I_E = -50 \mu A, I_C = 0$ )	-6.0	---	---	V
$I_{CBO}$	Collector cut-off Current ( $V_{CB} = -20V, I_E = 0$ )	---	---	-0.1	$\mu A$
$I_{EBO}$	Emitter cut-off Current ( $V_{EB} = -5V, I_C = 0$ )	---	---	-0.1	$\mu A$
$h_{FE}$	DC current gain ( $V_{CE} = -2V, I_C = -0.1A$ )	120	---	560	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C = -2A, I_B = -0.1A$ )	---	---	-0.5	V
$f_T$	Transition Frequency ( $V_{CE} = 2.0Vdc, I_C = 0.5Adc$ )	120	---	---	MHz

**CLASSIFICATION OF  $h_{FE}$**

Rank	Q	R	S
Range	120-270	180-390	270-560

**TO-92S**



- 1. EMITTER
- 2. COLLECTOR
- 3. BASE

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A		.16		4.00	
B		.12		3.00	
C	.59	---	15.00	---	
D		.02		0.45	
E		.08		2.00	
G		.20		5.00	



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## Ordering Information

Device	Packing
(Part Number)-BP	Bulk;1Kpcs/Bag

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