



Micro Commercial Components



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

Features

- Lead Free Finish/Rohs Compliant ("P" Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 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
 $T_J, T_{stg}: -55^{\circ}C \text{ to } +150^{\circ}C$
- Halogen free available upon request by adding suffix "-HF"

Electrical Characteristics @ 25°C Unless Otherwise Specified

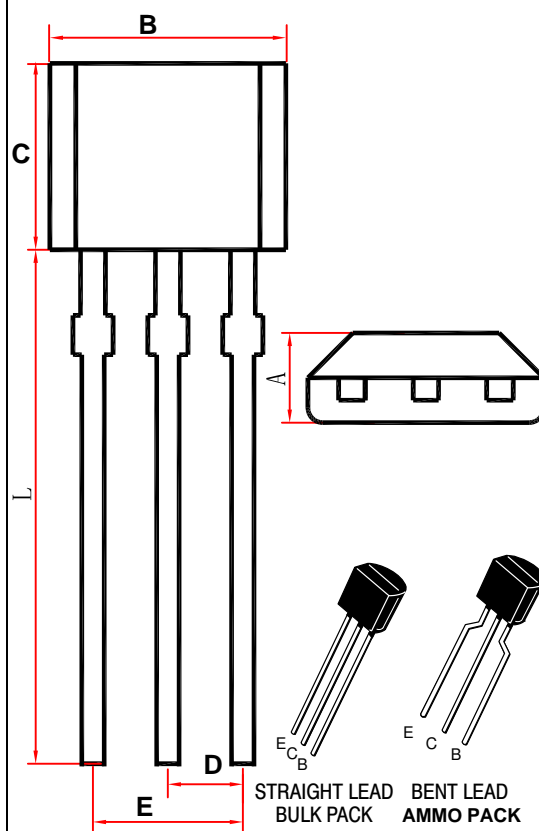
Symbol	Parameter	Min	Typ	Max	Unit
V_{CEO}	Collector-Emitter Voltage ($I_C = -50 \mu A, I_E = 0$)	-50	---	---	V
V_{CBO}	Collector-Base Voltage ($I_C = -1 \mu A, I_E = 0$)	-60	---	---	V
V_{EBO}	Emitter-Base Voltage ($I_E = -50 \mu A, I_C = 0$)	-6.0	---	---	V
I_{CBO}	Collector cut-off Current ($V_{CB} =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

PNP Plastic-Encapsulate Transistors

TO-92S



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.056	.064	1.42	1.62	
B	.154	.161	3.90	4.10	
C	.120	.128	3.05	3.25	
D	.050		1.27		Straight Lead
	.086	.110	2.20	2.80	Bent Lead
E	.096	.104	2.44	2.64	Straight Lead
	.173	.220	4.40	5.60	Bent Lead
L	.594	.610	15.10	15.50	

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

www.mccsemi.com

Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 30Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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