



Micro Commercial Components



Micro Commercial Components  
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**M28S-B**  
**M28S-C**  
**M28S-D**

## Features

- Capable of 0.625Watts of Power Dissipation.
- Collector-current 1.0A
- Collector-base Voltage 40V
- Operating and storage junction temperature range: -55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Marking: M28S X

**NPN Silicon**  
**Plastic-Encapsulate**  
**Transistor**

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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### OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=1.0mA$ , $I_B=0$ )	20	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=0.1mA$ , $I_E=0$ )	40	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=0.1mA$ , $I_C=0$ )	6.0	---	Adc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=40Vdc$ , $I_E=0$ )	---	1.0	$\mu A$ dc
$I_{CEO}$	Collector Cutoff Current ( $V_{CE}=20Vdc$ , $I_E=0$ )	----	5.0	Vdc
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0Vdc$ , $I_C=0$ )	---	0.1	$\mu A$ dc

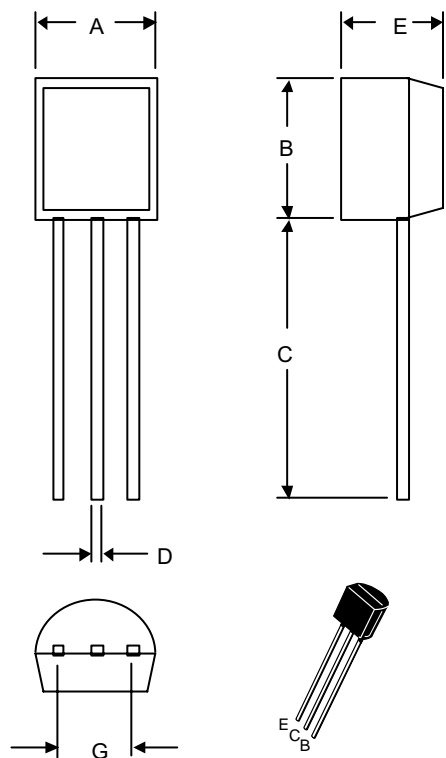
### ON CHARACTERISTICS

$h_{FE-1}$	DC Current Gain ( $I_C=1.0mA$ , $V_{CE}=1.0Vdc$ )	290	1000	---
$h_{FE-2}$	DC Current Gain ( $I_C=100mA$ , $V_{CE}=1.0Vdc$ )	300	1000	---
$h_{FE-3}$	DC Current Gain ( $I_C=300mA$ , $V_{CE}=1.0Vdc$ )	300	1000	---
$h_{FE-4}$	DC Current Gain ( $I_C=500mA$ , $V_{CE}=1.0Vdc$ )	300	1000	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=600mA$ , $I_B=20mA$ )	---	0.55	Vdc
$f_T$	Transition Frequency ( $V_{CE}=10Vdc$ , $I_C=50mA$ , $f=30MHz$ )	100	---	MHz

### CLASSIFICATION OF $h_{FE}$

Rank	B	C	D
Range	300-550	500-700	650-1000

TO-92



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.170	.190	4.33	4.83	
B	.170	.190	4.30	4.83	
C	.550	.590	13.97	14.97	
D	.010	.020	0.36	0.56	
E	.130	.160	3.30	3.96	
G	.096	.104	2.44	2.64	



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### Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

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