



Micro Commercial Components

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M28S
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
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- 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 ($I_C=1.0\text{mAdc}$, $I_B=0$)	20	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=0.1\text{mAdc}$, $I_E=0$)	40	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=0.1\text{mAdc}$, $I_C=0$)	6.0	---	Adc
I_{CBO}	Collector Cutoff Current ($V_{CB}=40\text{Vdc}$, $I_E=0$)	---	1.0	μAdc
I_{CEO}	Collector Cutoff Current ($V_{CE}=20\text{Vdc}$, $I_E=0$)	----	5.0	Vdc
I_{EBO}	Emitter Cutoff Current ($V_{EB}=5.0\text{Vdc}$, $I_C=0$)	---	0.1	μAdc

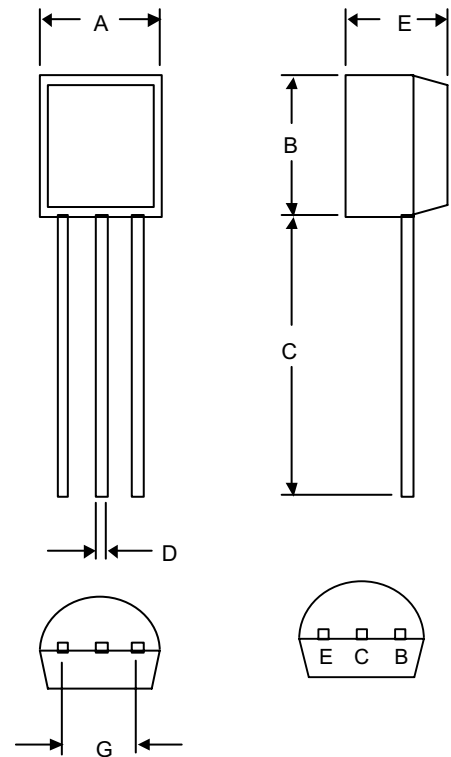
ON CHARACTERISTICS

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

CLASSIFICATION OF h_{FE}

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

TO-92



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	.010	.104	2.44	2.64	



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