

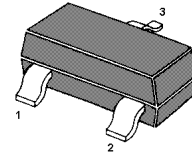
# MMBT28S

## NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages.

The transistor is subdivided into one group, according to its DC current gain.

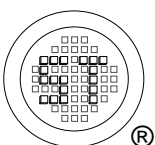
On special request, these transistors can be manufactured in different pin configurations.



1. Base 2. Emitter 3. Collector  
TO-236 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	40	V
Collector Emitter Voltage	$V_{CEO}$	20	V
Emitter Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	1	A
Peak Collector Current	$I_{CM}$	1.25	A
Base Current	$I_B$	100	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{Stg}$	-55 to +150	$^\circ\text{C}$



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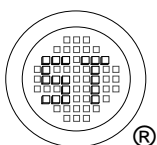


Dated : 16/03/2015 Rev:01

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## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

	Symbol	Min.	Max.	Unit
DC Current Gain				
at $V_{CE}=1\text{V}$ , $I_C=5\text{mA}$	$h_{FE}$	45	-	-
at $V_{CE}=1\text{V}$ , $I_C=100\text{mA}$	$h_{FE}$	200	1000	-
at $V_{CE}=1\text{V}$ , $I_C=800\text{mA}$	$h_{FE}$	40	-	-
Collector Base Breakdown Voltage				
at $I_C=100\mu\text{A}$	$V_{(BR)CBO}$	40	-	V
Collector Emitter Breakdown Voltage				
at $I_C=2\text{mA}$	$V_{(BR)CEO}$	20	-	V
Emitter Base Breakdown Voltage				
at $I_E=100\mu\text{A}$	$V_{(BR)EBO}$	6	-	V
Collector Cutoff Current				
at $V_{CB}=35\text{V}$	$I_{CBO}$	-	100	nA
Emitter Cutoff Current				
at $V_{BE}=6\text{V}$	$I_{EBO}$	-	100	nA
Collector Saturation Voltage				
at $I_C=600\text{mA}$ , $I_B=20\text{mA}$	$V_{CE(sat)}$	-	0.55	V
Base Saturation Voltage				
at $I_C=600\text{mA}$ , $I_B=20\text{mA}$	$V_{BE(sat)}$	-	1.2	V
Base Emitter Voltage				
at $I_C=10\text{mA}$ , $V_{CE}=1\text{V}$	$V_{BE}$	-	1.0	V
Gain Bandwidth Product				
at $V_{CE}=10\text{V}$ , $I_C=50\text{mA}$	$f_T$	100	-	MHz
Collector Base Capacitance				
at $V_{CB}=10\text{V}$ , $f=1\text{MHz}$	$C_{OB}$	-	9	pF



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