

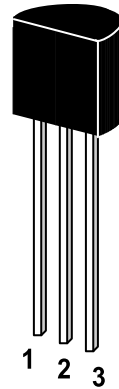
# ST 2SA1016

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## PNP Silicon Epitaxial Planar Transistor

High -Voltage Low-Noise Amp applications

The transistor is subdivided into three groups F, G and H, according to its DC current gain.



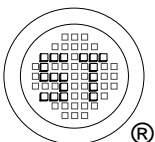
1. Emitter 2. Collector 3. Base

TO-92 Plastic Package

Weight approx. 0.19g

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

	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	120	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	100	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	50	mA
Collector Current (Pulse)	$-I_{\text{CP}}$	100	mA
Collector Dissipation	$P_{\text{tot}}$	400	mW
Junction Temperature	$T_{\text{j}}$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{s}}$	-55 to +125	$^\circ\text{C}$



**SEMTECH ELECTRONICS LTD.**

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ISO/TS 16949 : 2002  
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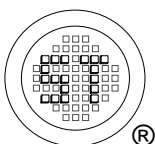
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## Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}=6\text{V}$ , $-I_C=1\text{mA}$					
Current Gain Group	F	160	-	320	-
	G	280	-	560	-
	H	480	-	960	-
Collector Base Breakdown Voltage at $-I_C=10\mu\text{A}$	$-V_{(BR)CBO}$	120	-	-	V
Collector Emitter Breakdown Voltage at $-I_C=1\text{mA}$	$-V_{(BR)CEO}$	100	-	-	V
Emitter Base Breakdown Voltage at $-I_E=10\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current at $-V_{CB}=80\text{V}$	$-I_{CBO}$	-	-	1	$\mu\text{A}$
Emitter Cutoff Current at $-V_{EB}=4\text{V}$	$-I_{EBO}$	-	-	1	$\mu\text{A}$
Collector Emitter Saturation Voltage at $-I_C=10\text{mA}$ , $-I_B=1\text{mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Gain Bandwidth Product at $-V_{CE}=6\text{V}$ , $-I_C=1\text{mA}$	$f_T$	-	110	-	MHz
Output Capacitance at $-V_{CB}=10\text{V}$ , $f=1\text{MHz}$	$C_{OB}$	-	2.2	-	pF
Noise Level at $V_{CC}=30\text{V}$ , $I_C=1\text{mA}$ $R_g=56\text{K}\Omega$ , $V_G=77\text{dB}/1\text{kHz}$	$C_{NO(ave)}$	-	-	35	mV
Noise Peak Level at $V_{CC}=30\text{V}$ , $I_C=1\text{mA}$ $R_g=56\text{K}\Omega$ , $V_G=77\text{dB}/1\text{kHz}$	$C_{NO(peak)}$	-	-	200	mV



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