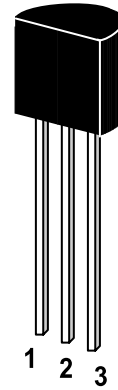


**NPN Silicon Epitaxial Planar Transistor**  
for switching and AF amplifier applications.

The transistor is subdivided into six groups, D, E, F, G, H and I, according to its DC current gain.

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

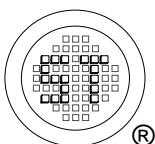


1. Emitter 2. Base 3. Collector

TO-92 Plastic Package  
Weight approx. 0.19g

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

	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	50	V
Collector Emitter Voltage	$V_{CEO}$	30	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	30	mA
Power Dissipation	$P_{tot}$	400	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-55 to +150	$^\circ\text{C}$



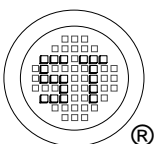
**SEMTECH ELECTRONICS LTD.**  
(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002 Certificate No. 05103  
ISO 14001:2004 Certificate No. 014  
ISO 9001:2000 Certificate No. 014

**Characteristics at  $T_{amb}=25\text{ }^{\circ}\text{C}$**

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=5\text{V}$ , $I_C=1\text{mA}$					
Current Gain Group D	$h_{FE}$	28	-	45	-
E	$h_{FE}$	39	-	60	-
F	$h_{FE}$	54	-	80	-
G	$h_{FE}$	72	-	108	-
H	$h_{FE}$	97	-	146	-
I	$h_{FE}$	132	-	198	-
Collector Base Breakdown Voltage at $I_C=100\mu\text{A}$	$V_{(BR)CBO}$	50	-	-	V
Collector Emitter Breakdown Voltage at $I_C=1\text{mA}$	$V_{(BR)CEO}$	30	-	-	V
Emitter Base Breakdown Voltage at $I_E=100\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current at $V_{CB}=50\text{V}$	$I_{CBO}$	-	-	100	nA
Emitter Cutoff Current at $V_{CB}=5\text{V}$	$I_{EBO}$	-	-	100	nA
Collector Emitter Saturation Voltage at $I_C=10\text{mA}$ , $I_B=1\text{mA}$	$V_{CE(sat)}$	-	0.08	0.3	V
Base Emitter Voltage at $V_{CE}=5\text{V}$ , $I_C=1\text{mA}$	$V_{BE(on)}$	0.60	0.7	0.75	V
Collector Base Capacitance at $V_{CB}=10\text{V}$ , $f=1\text{MHz}$	$C_{CBO}$	-	1.5	-	pF
Gain Bandwidth Product at $V_{CE}=5\text{V}$ , $I_C=1\text{mA}$	$f_T$	150	370	-	MHz



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 014



ISO 9001:2000  
Certificate No. 014