

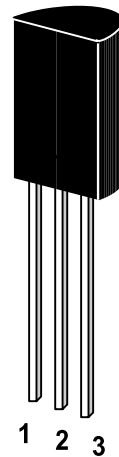
SD13002 / SD13003

NPN Silicon Epitaxial Planar Transistor

for power switching and electron rectifier applications.

These transistors are subdivided into one group according to its DC current gain.

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



1. Emitter 2. Collector 3. Base

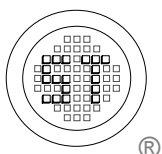
TO-92L Plastic Package

Weight approx. 0.38g

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

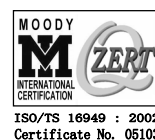
	Symbol	Value		Unit
		13002	13003	
Collector Base Voltage	V_{CBO}	600		V
Collector Emitter Voltage	V_{CEO}	400		V
Emitter Base Voltage	V_{EBO}	9		V
Collector Current	I_{C}	1	1.5	A
Power Dissipation	P_{tot}	1.15	1.25	W
Junction Temperature	T_{j}	150		$^\circ\text{C}$
Storage Temperature Range	T_{s}	-55~+150		$^\circ\text{C}$

G S P FORM A IS AVAILABLE



SEMTECH ELECTRONICS LTD.

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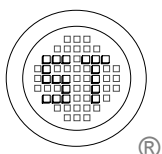
Dated : 07/12/2002

SD13002 / SD13003

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

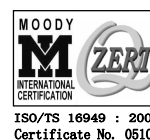
		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=10\text{V}$, $I_C=100\text{mA}$		h_{FE}	10	-	70	
Collector Base Breakdown Voltage at $I_C=1\text{mA}$	13002	$V_{(BR)CBO}$	600	-	-	V
at $I_C=5\text{mA}$	13003					
Collector Emitter Breakdown Voltage at $I_C=5\text{mA}$		$V_{(BR)CEO}$	400	-	-	V
Emitter Base Breakdown Voltage at $I_E=1\text{mA}$		$V_{(BR)EBO}$	9	-	-	V
Collector Cutoff Current at $V_{CB}=600\text{V}$	13002	I_{CBO}	-	-	100	nA
at $V_{CB}=700\text{V}$	13003					
Emitter Cutoff Current at $V_{EB}=9\text{V}$		I_{EBO}	-	-	100	μA
Collector Emitter Saturation Voltage at $I_C=0.1\text{A}$, $I_B=20\text{mA}$	13003	$V_{CE(sat)}$	-	-	0.4	V
at $I_C=0.5\text{A}$, $I_B=100\text{mA}$	13002	$V_{CE(sat)}$	-	-	0.8	V
at $I_C=0.2\text{A}$, $I_B=40\text{mA}$	13003	$V_{CE(sat)}$	-	-	0.8	V
Base-Emitter Saturation Voltage at $I_C=0.1\text{A}$, $I_B=20\text{mA}$	13003	$V_{BE(sat)}$	-	-	0.9	V
at $I_C=0.5\text{A}$, $I_B=100\text{mA}$	13002	$V_{BE(sat)}$	-	-	1.2	V
at $I_C=0.2\text{A}$, $I_B=40\text{mA}$	13003	$V_{BE(sat)}$	-	-	1.1	V

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