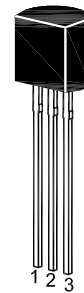


ST 2N3416 / 2N3417

NPN Silicon Epitaxial Planar Transistor

General Purpose Amplifier

For use as general purpose amplifiers and switches requiring collector current to 300 mA.



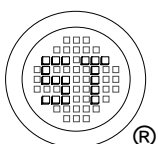
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 4.5\text{ V}$, $I_C = 2\text{ mA}$	2N3416 h_{FE}	75	225	-
	2N3417 h_{FE}	180	540	-
Collector Base Cutoff Current at $V_{CB} = 25\text{ V}$	I_{CBO}	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	100	nA
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	50	-	V
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	50	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $I_C = 50\text{ mA}$, $I_B = 3\text{ mA}$	$V_{CE(sat)}$	-	0.3	V
Base Emitter Saturation Voltage at $I_C = 50\text{ mA}$, $I_B = 3\text{ mA}$	$V_{BE(sat)}$	0.6	1.3	V



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited



Dated : 25/07/2003