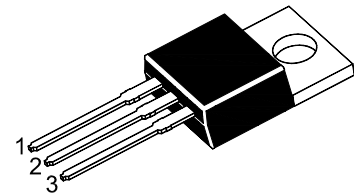


ST 13003

NPN Silicon Epitaxial Planar Transistor

for power switching and electron rectifier applications.

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



1.Base 2.Collector 3.Emitter

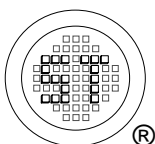
TO-220 Plastic Package

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

Parameter	Symbol	Value	Unit
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	1.5	A
Power Dissipation	P_{tot}	1.5	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$

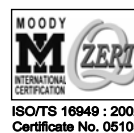
Characteristics at $T_{amb} = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	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 $I_C = 1\text{ mA}$	$V_{(BR)CBO}$	600	-	V
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	400	-	V
Emitter Base Breakdown Voltage at $I_E = 1\text{ mA}$	$V_{(BR)EBO}$	9	-	V
Collector Cutoff Current at $V_{CB} = 600\text{ V}$	I_{CBO}	-	100	nA
Emitter Cutoff Current at $V_{EB} = 9\text{ V}$	I_{EBO}	-	100	μA
Collector Emitter Saturation Voltage at $I_C = 1\text{ A}$, $I_B = 250\text{ mA}$	$V_{CE(sat)}$	-	1	V
Base Emitter Saturation Voltage at $I_C = 1\text{ A}$, $I_B = 250\text{ mA}$	$V_{BE(sat)}$	-	1.2	V



SEMTECH ELECTRONICS LTD.

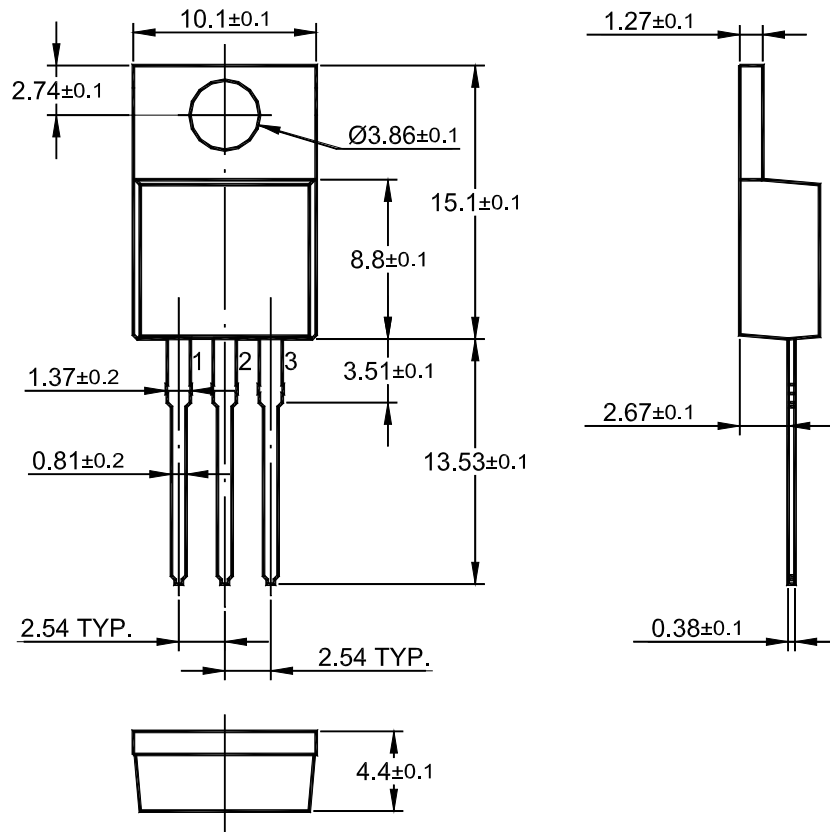
(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



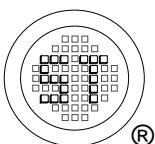
Dated : 22/03/2006

ST 13003

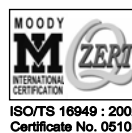
TO-220 PACKAGE OUTLINE



Dimensions in mm



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



Dated : 22/03/2006