

General Description

The 2SA2039 is PNP silicon power transistor, Designed for general purpose amplifier and low speed switching applications.

Product Summary

V _{CEO}	I _C
-50V	-5A

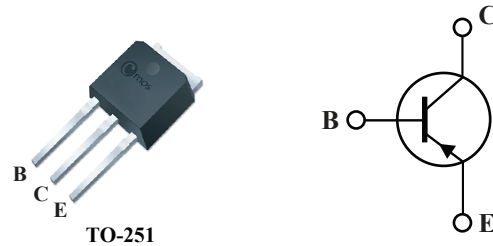
Applications

- Power supplies, relay drivers, lamp drivers

Features

- Fast switching speed
- Adoption of FBET, MBIT processes
- High breakdown voltage and large current capacity

TO-251 Pin Configuration



Absolute Maximum Ratings(T_a = 25°C)

Symbol	Parameter	Rating	Units
V _{CB0}	Collector to Base Voltage	-50	V
V _{CEO}	Collector to Emitter Voltage	-50	V
V _{EB0}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-5	A
P _C	Collector Dissipation(T _C =25°C)	15	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Junction Temperature	150	°C

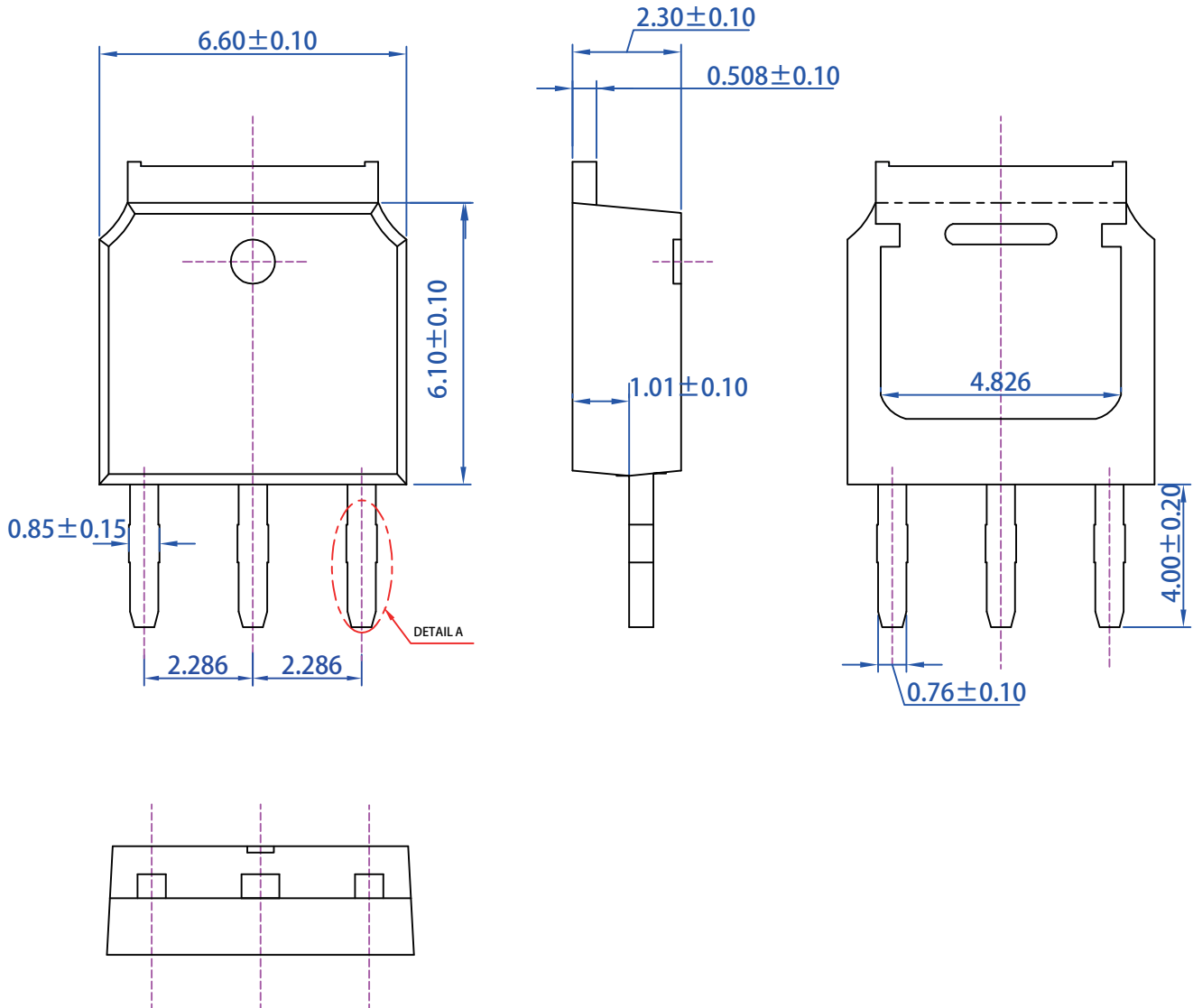
Electrical Characteristics ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{CBO}	Collector-base breakdown voltage	$I_C = -2\text{mA}$, $I_E = 0$	---	---	-50	V
BV_{CEO}	Collector-emitter breakdown voltage	$I_C = -2\text{mA}$, $I_B = 0$	---	---	-50	V
BV_{EBO}	Emitter-base breakdown voltage	$I_E = -10\mu\text{A}$, $I_C = 0$	-5	---	---	V
I_{CBO}	Collector cut-off current	$V_{CB} = 90\text{V}$, $I_E = 0$	---	---	80	nA
h_{FE}	DC Current Gain	$I_C = -500\text{mA}$, $V_{CE} = -2.0\text{V}$	200	---	560	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -250\text{mA}$, $I_B = -2.5\text{A}$	---	---	0.2	V
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = -1\text{MHz}$	---	24	---	pF
f_T	Current Gain Bandwidth Product	$I_C = -500\text{mA}$, $V_{CE} = -10\text{V}$	---	360	---	MHz
t_{on}	Fall Time	See specified test circuit.	---	30	---	ns
t_{stg}	Storage Time	See specified test circuit.	---	230	---	ns
t_f	Turn-On Time	See specified test circuit.	---	15	---	ns

This product has been designed and qualified for the consumer market.
 Cmos assumes no liability for customers' product design or applications.
 Cmos reserves the right to improve product design, functions and reliability without notice.

Package Dimensions

Complementary power Darlington transistors



Note:

1. Tolerance ± 0.15 is not noted, and rounded corners R Max =0.25 is not marked
2. Mark the unit MM
3. The top pinhole is not allowed to protrude from the plastic sealing surface