

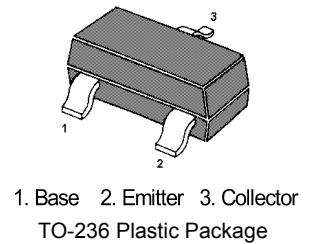
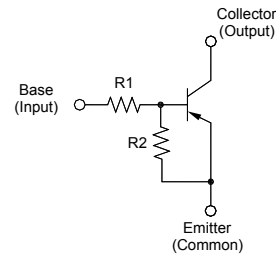
MMDTB231

PNP Silicon Epitaxial Planar Transistor

for switching and interface circuit and drive circuit applications

Features

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

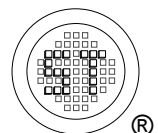


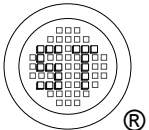
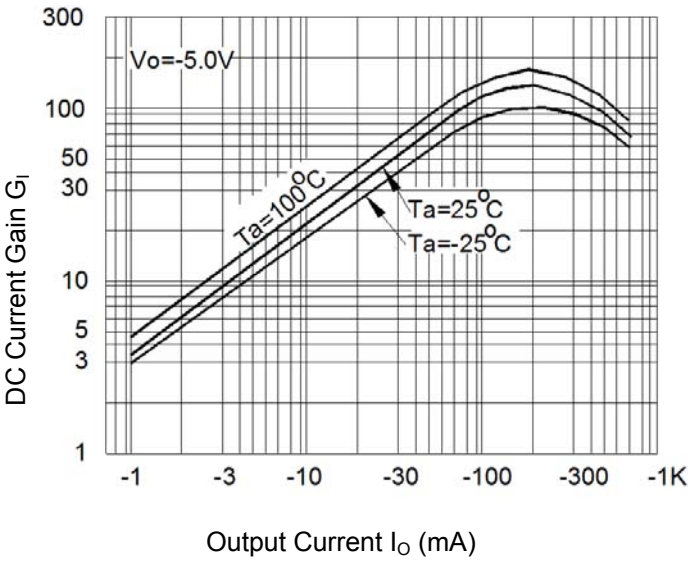
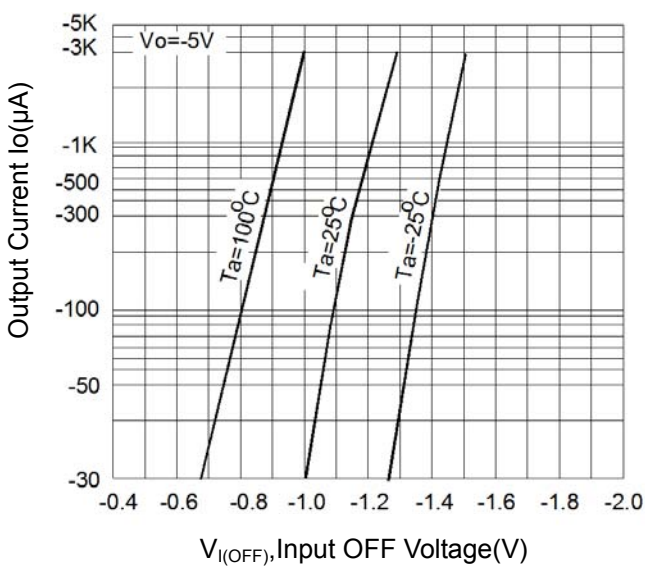
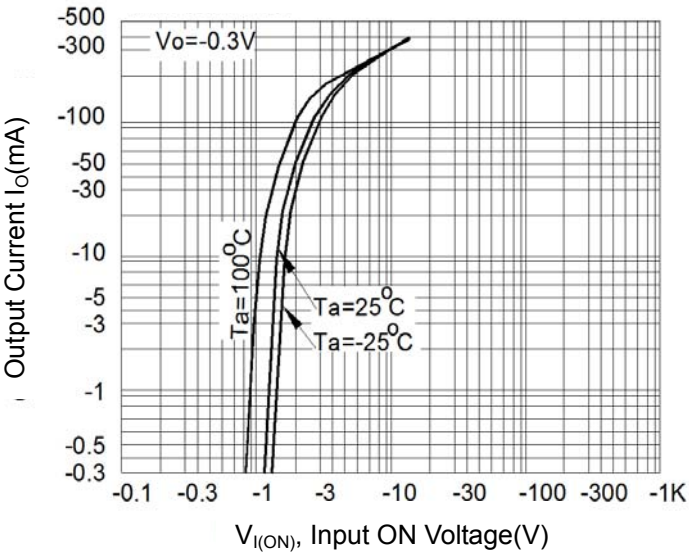
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Output Voltage	$-V_O$	50	V
Input Voltage	$-V_I$	- 10 to + 12	V
Output Current	$-I_O$	500	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$, $-I_C = 50\text{ mA}$	G_I	39	-	-	-
Output Cutoff Current at $-V_O = 50\text{ V}$	$-I_{O(OFF)}$	-	-	0.5	μA
Input Current at $-V_I = 5\text{ V}$	$-I_I$	-	-	3.8	mA
Output Voltage at $-I_O = 50\text{ mA}$, $-I_I = 2.5\text{ mA}$	$-V_{O(ON)}$	-	-	0.3	V
Input Voltage (on) at $-V_O = 0.3\text{ V}$, $-I_O = 20\text{ mA}$	$-V_{I(on)}$	-	-	3	V
Input Voltage (off) at $-V_O = 5\text{ V}$, $-I_O = 100\text{ }\mu\text{A}$	$-V_{I(off)}$	0.5	-	-	V
Transition Frequency at $-V_O = 10\text{ V}$, $-I_O = 5\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	200	-	MHz
Input Resistance	R_1	1.54	2.2	2.86	$\text{K}\Omega$
Resistance Ratio	R_2 / R_1	0.8	1	1.2	-



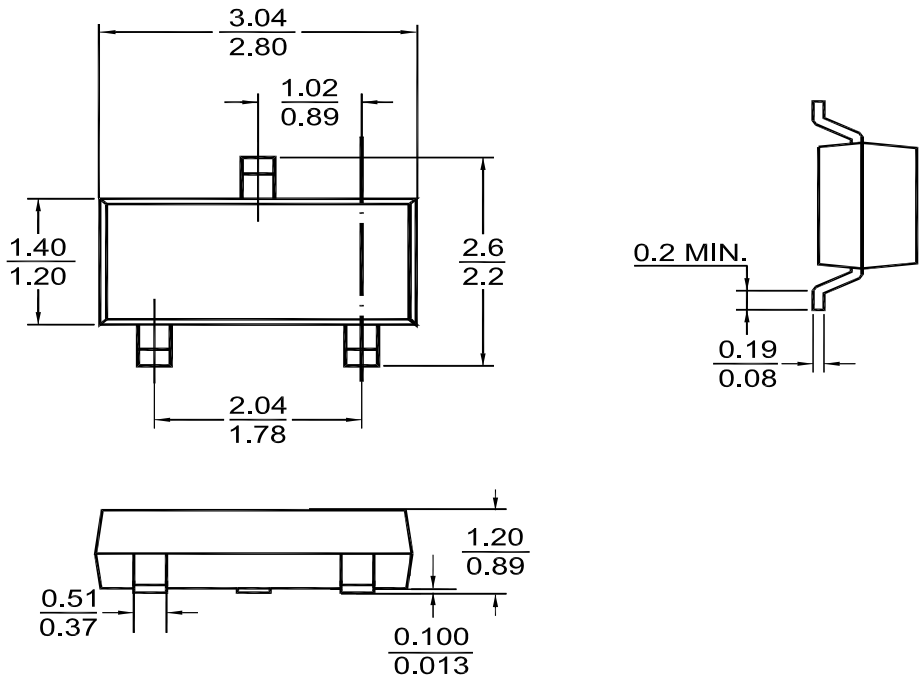


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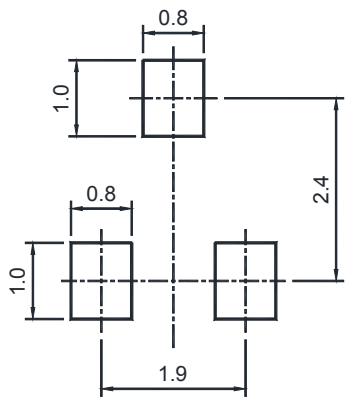
PACKAGE OUTLINE

Plastic surface mounted package (Dimensions in mm)

TO-236



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
TO-236	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

