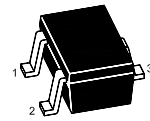
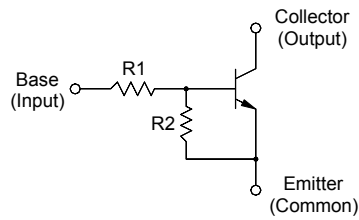


MMDTD113W

NPN Silicon Epitaxial Planar Digital Transistor

Resistance Values

R1 (K Ω)	R2 (K Ω)
1	10



1.Base 2.Emitter 3.Collector
SOT-323 Plastic Package

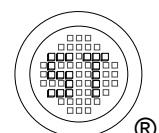
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

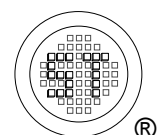
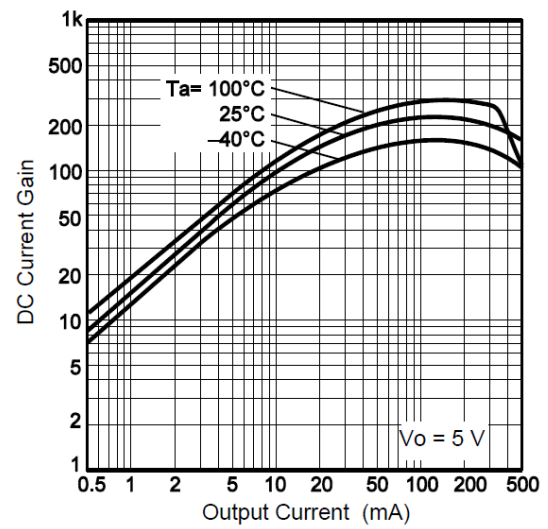
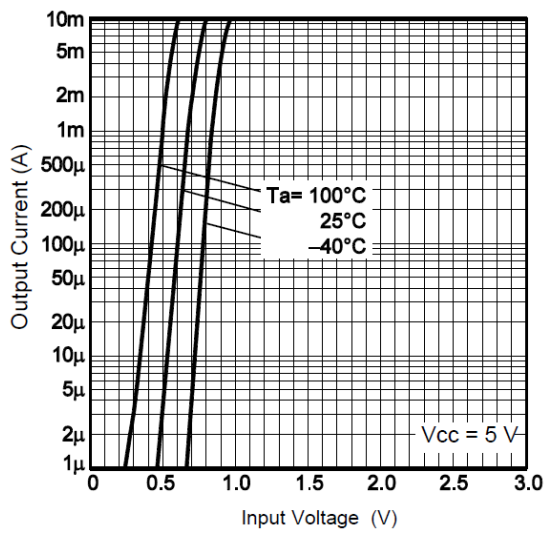
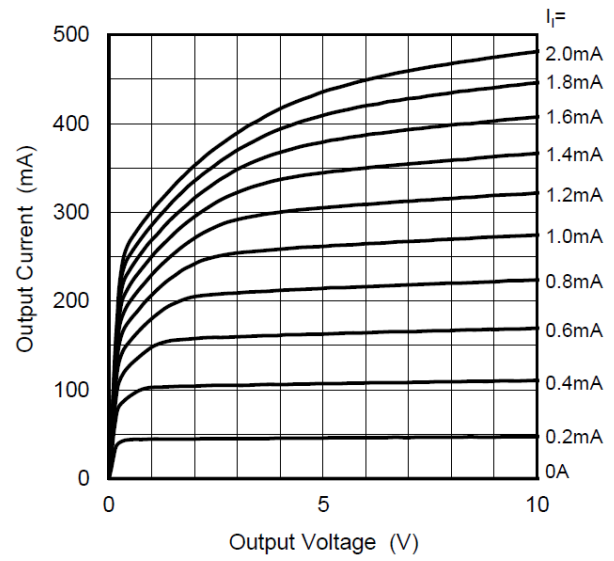
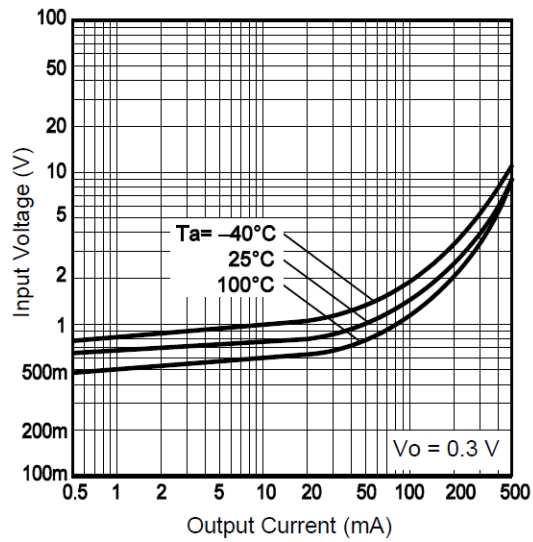
Parameter	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	50	V
Input Voltage	V_I	- 5 to + 10	V
Collector Current	I_C	500	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$	h_{FE}	56	-	-	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$	I_{CBO}	-	-	0.5	μA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	7.2	mA
Collector Emitter Saturation Voltage at $I_C = 50\text{ mA}$, $I_B = 2.5\text{ mA}$	V_{CEsat}	-	-	0.3	V
Input Off Voltage at $V_{CE} = 5\text{ V}$, $I_C = 100\text{ }\mu\text{A}$	$V_{I(off)}$	0.3	-	-	V
Input On Voltage at $V_{CE} = 0.3\text{ V}$, $I_C = 20\text{ mA}$	$V_{I(on)}$	-	-	3	V
Input Resistance	R1	0.7	1	1.3	K Ω
Resistance Ratio	R2/R1	8	10	12	-
Transition Frequency ¹⁾ at $V_{CE} = 10\text{ V}$, $-I_E = 50\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	200	-	MHz

¹⁾ Characteristics of built-in transistor.

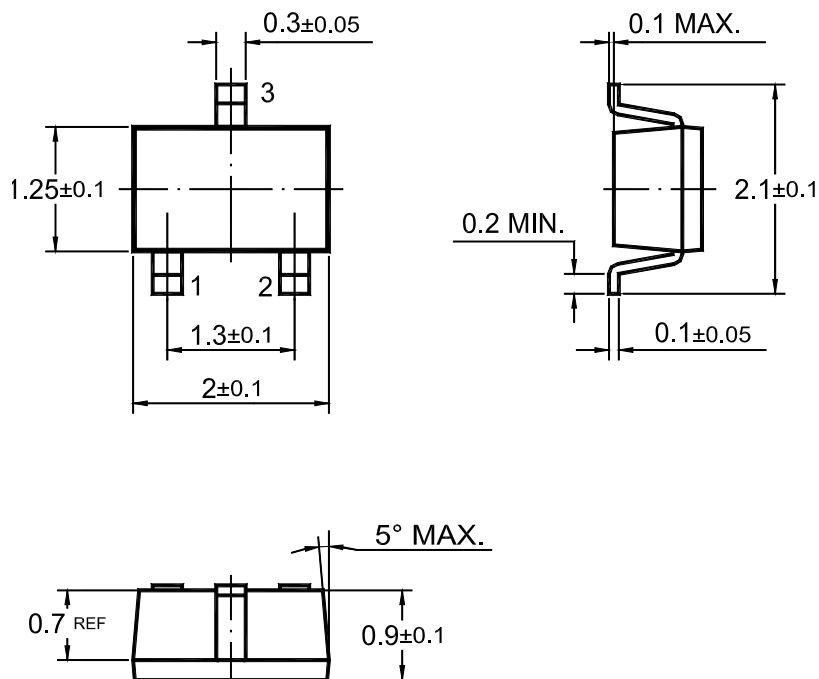




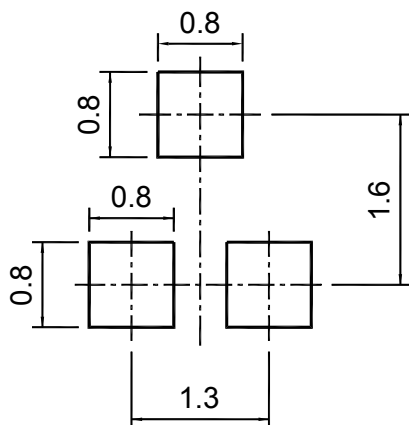
MMDTD113W

PACKAGE OUTLINE(Dimensions in mm)

SOT-323



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

