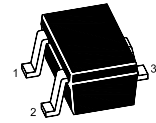
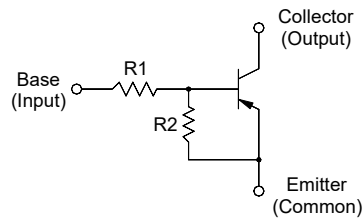


MMDTA115W

PNP Silicon Epitaxial Planar Digital Transistor



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

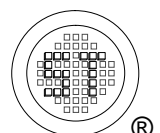
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	V_{EBO}	- 40 to + 10	V
Collector Current	$-I_C$	100	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Resistance Ratings

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	625	$^\circ\text{C/W}$

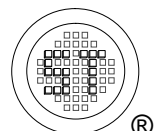
¹⁾ Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



MMDTA115W

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$, $-I_C = 5\text{ mA}$	h_{FE}	82	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	-	500	nA
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	150	μA
Collector Emitter Saturation Voltage at $-I_C = 5\text{ mA}$, $-I_B = 0.25\text{ mA}$	$-V_{CEsat}$	-	-	0.3	V
Input Off Voltage at $-V_{CE} = 5\text{ V}$, $-I_C = 100\text{ }\mu\text{A}$	$-V_{I(off)}$	0.5	-	-	V
Input On Voltage at $-V_{CE} = 0.3\text{ V}$, $-I_C = 1\text{ mA}$	$-V_{I(on)}$	-	-	3	V
Transition Frequency at $-V_{CE} = 10\text{ V}$, $I_E = 5\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	250	-	MHz
Input Resistance	R1	70	100	130	K Ω
Resistance Ratio	R2/R1	0.8	1	1.2	-



Electrical Characteristics Curves

Fig 1. Output Curve

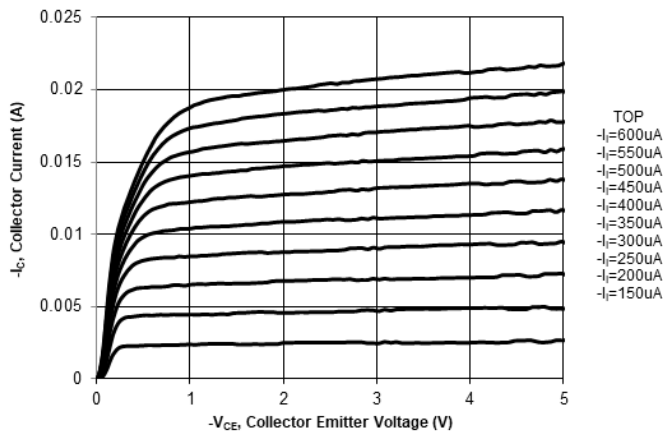


Fig 2. Output Curve

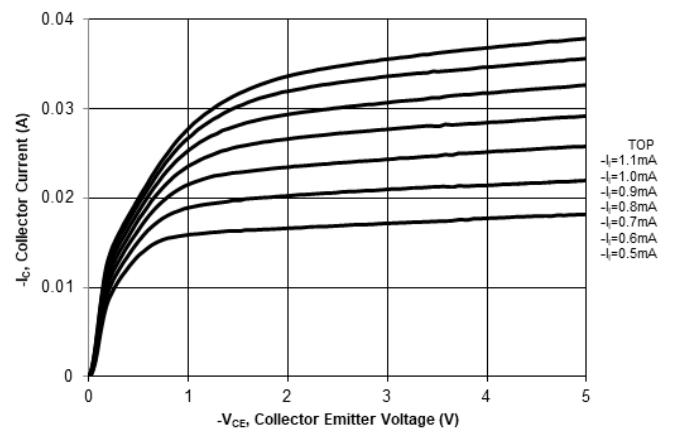


Fig 3. Collector Current vs. $V_{I(on)}$

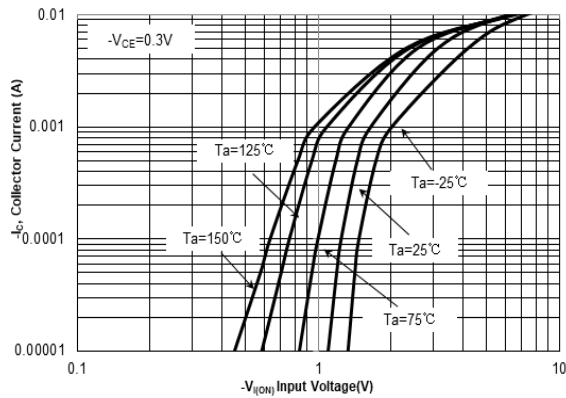


Fig 4. Collector Current vs. $V_{I(off)}$

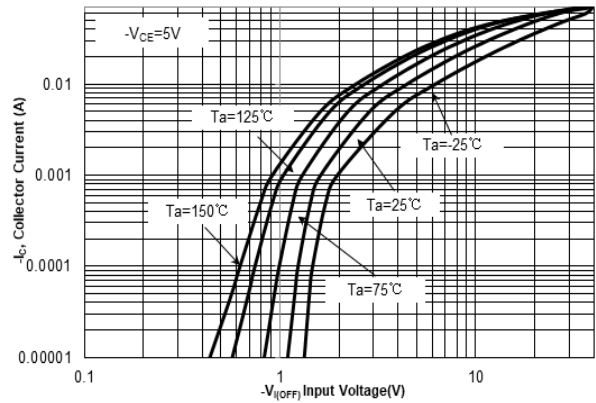


Fig 5. h_{FE} vs. Collector Current

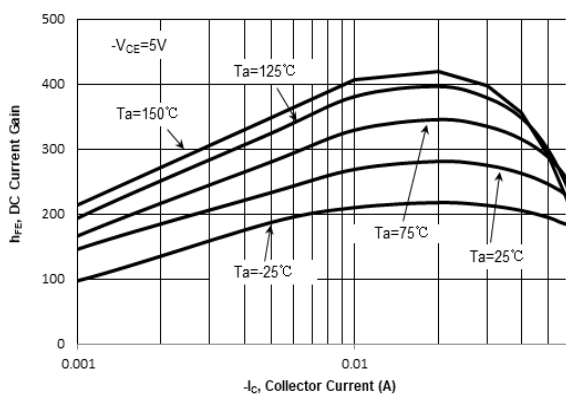
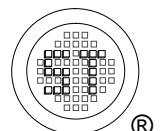
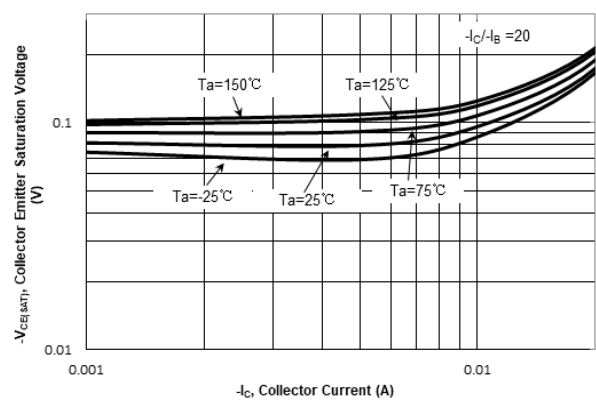
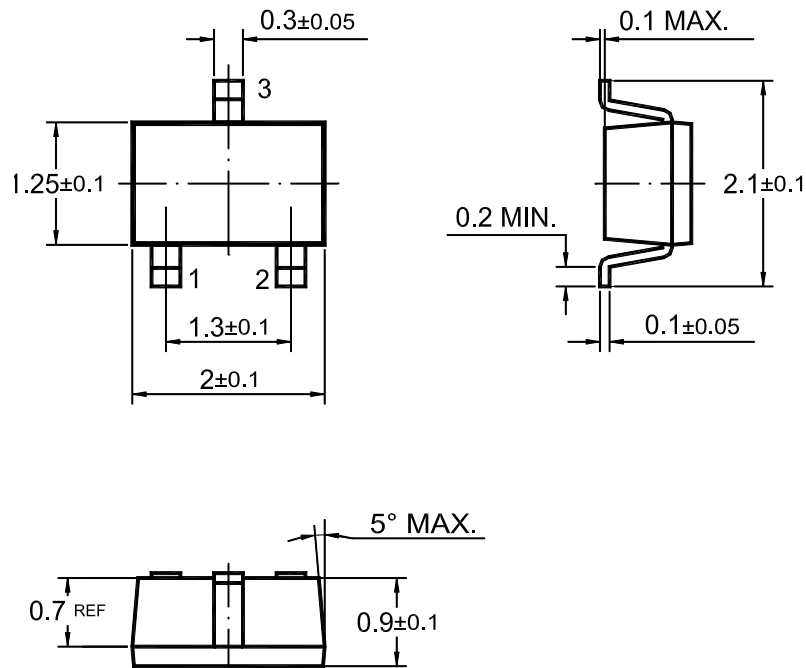


Fig 6. $V_{CE(sat)}$ vs. Collector Current

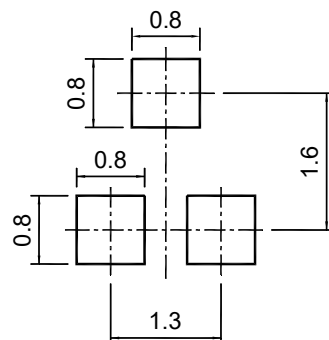


PACKAGE OUTLINE(Dimensions in mm)

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

Marking information

" DC " = Part No.

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

