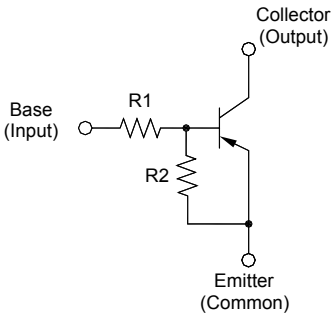
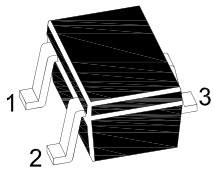
MMDTA123YE

PNP Silicon Epitaxial Planar Digital Transistor

Features

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





1.Base 2.Emitter 3.Collector
SOT-523 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Emitter Voltage	$-V_{CEO}$	50	V
Input Voltage	V_I	- 12 to + 5	V
Collector Current	$-I_C$	100	mA
Total Power Dissipation	P_{tot}	150	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	- 55 to + 150	℃

Characteristics at T_a = 25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	h_{FE}	33	-	-	-
Collector Base Cutoff Current at $-V_{CB}$ = 50 V	$-I_{CBO}$	-	-	0.5	μA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V	$-I_{EBO}$	-	-	3.8	mA
Collector Emitter Saturation Voltage at $-I_C$ = 10 mA, $-I_B$ = 0.5 mA	$-V_{CE(sat)}$	-	-	0.3	V
Input off Voltage at $-V_{CE}$ = 5 V, $-I_C$ = 100 μA	$-V_{I(off)}$	0.3	-	-	V
Input on Voltage at $-V_{CE}$ = 0.3 V, $-I_C$ = 20 mA	$-V_{I(on)}$	-	-	3	V
Transition Frequency at $-V_{CE}$ = 10 V, I_E = 5 mA, f = 100 MHz	f_T	-	250	-	MHz
Input Resistance	R_1	1.54	2.2	2.86	KΩ
Resistance Ratio	R_2 / R_1	3.6	4.5	5.5	-

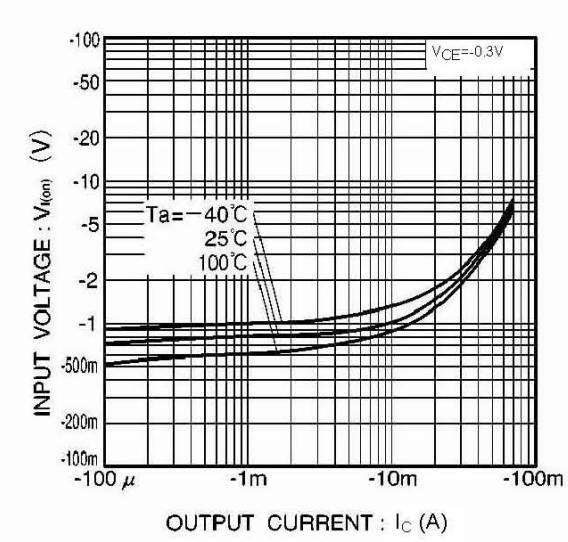


Fig.1 Input voltage vs. output current (ON characteristics)

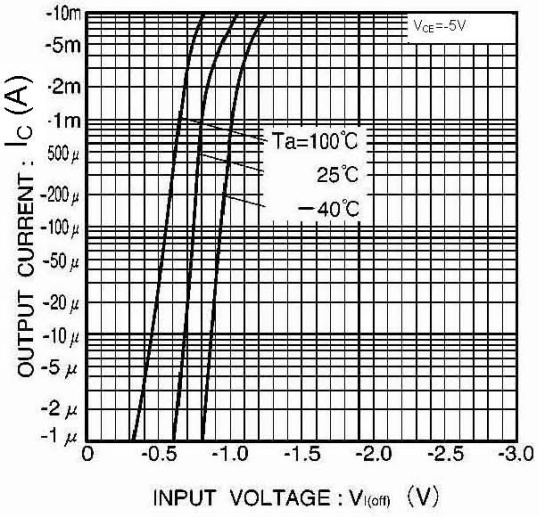


Fig.2 Output current vs. input voltage (OFF characteristics)

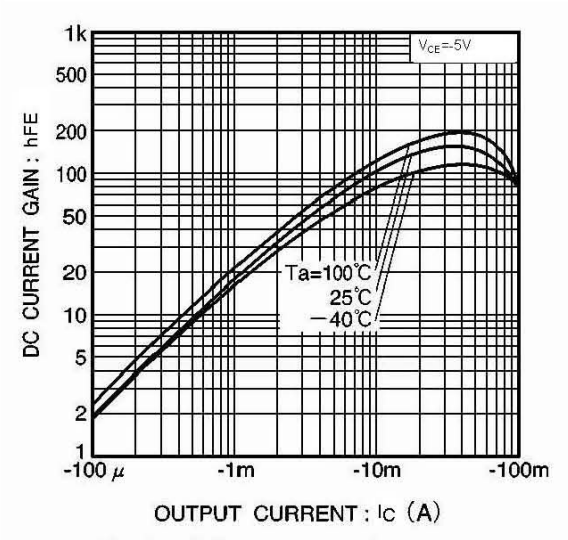


Fig.3 DC current gain vs. output current

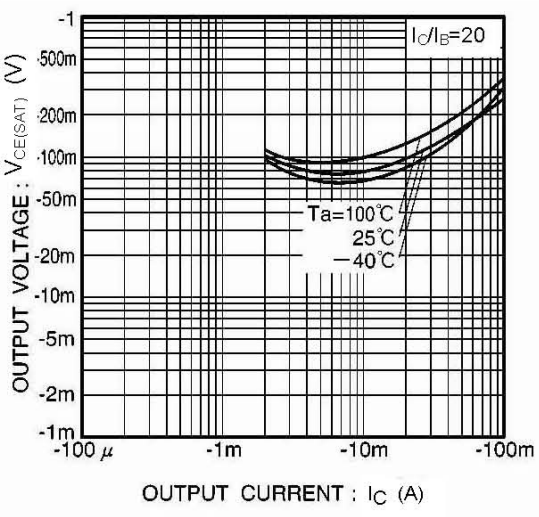


Fig.4 Output voltage vs. output current