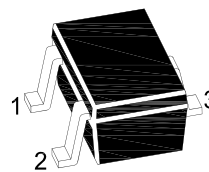
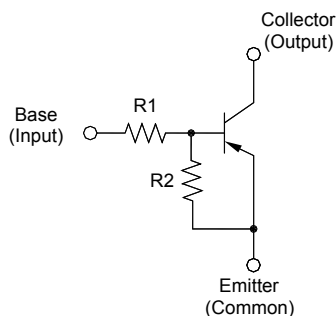


# MMDTA114YE

## 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 ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Emitter Voltage	$-V_{CEO}$	50	V
Input Voltage	$V_i$	- 40 to + 6	V
Collector Current	$-I_C$	100	mA
Total Power Dissipation	$P_{tot}$	150	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

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

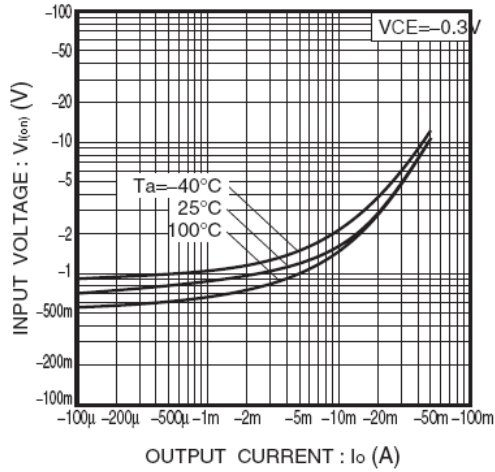
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$ , $-I_C = 5\text{ mA}$	$h_{FE}$	68	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	-	0.5	$\mu\text{A}$
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	0.88	mA
Collector Emitter Saturation Voltage at $-I_C = 5\text{ mA}$ , $-I_B = 0.25\text{ mA}$	$-V_{CE(sat)}$	-	-	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 $-V_{CE} = 0.3\text{ V}$ , $-I_C = 1\text{ mA}$	$-V_{I(on)}$	-	-	1.4	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	7	10	13	K $\Omega$
Resistance Ratio	R2 / R1	3.7	4.7	5.7	-

**TOP DYNAMIC**

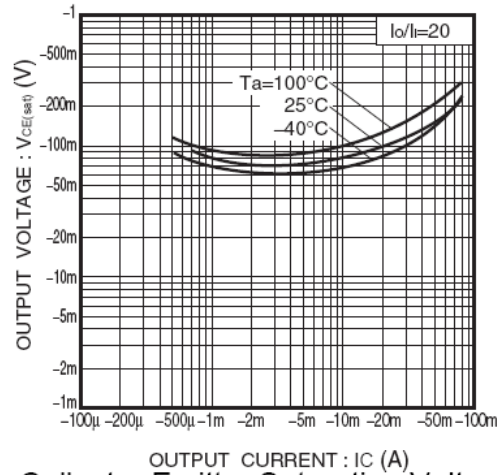


Dated : 21/12/2012 Rev:01

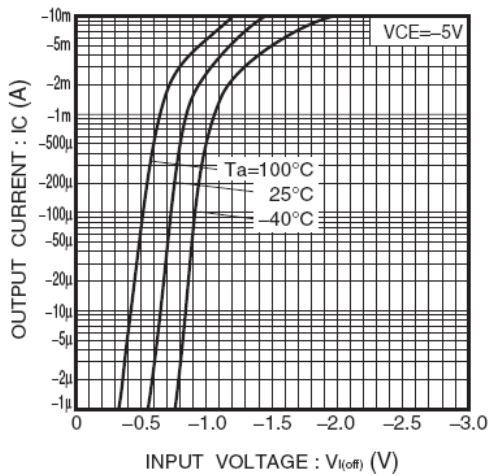
# MMDTA114YE



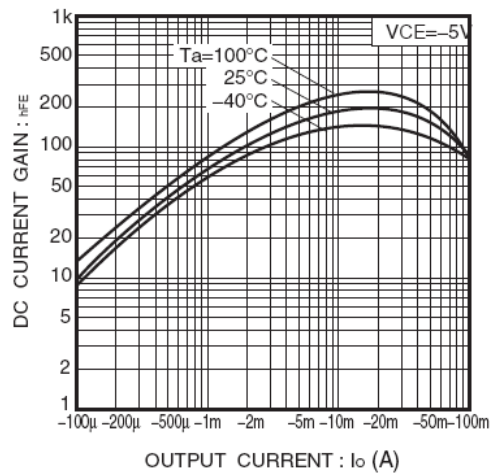
Input voltage vs. output current  
(ON characteristics)



Collector Emitter Saturation Voltage



Output current vs. input voltage



DC current gain vs. output current

**TOP DYNAMIC**



ISO14001 : 2004 Certificate No. 121506007  
 ISO 9001 : 2008 Certificate No. 50114012  
 OHSAS 18001 : 2007 Certificate No. 05131506006  
 IECQ QC 080000 Certificate No. ECQH000174022