

# General purpose (dual digital transistors)

## IMB5A

### ●Feature

1) Two DTA124E chips in a UMT or SMT package.

### ●Absolute maximum ratings (Ta=25°C)

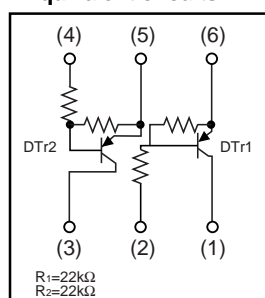
Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>CC</sub>	-50	V
Input voltage	V <sub>IN</sub>	-40	V
		10	
Output current	I <sub>O</sub>	-30	mA
Collector current	I <sub>C(MAX)</sub>	-100	mA
Power dissipation	P <sub>d</sub>	300(TOTAL)	mW *
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* 200mW per element must not be exceeded.

### ●Package, marking, and packaging specifications

Part No.	IMB5A
Package	SMT6
Marking	B5
Code	T110
Basic ordering unit (pieces)	3000

### ●Equivalent circuits

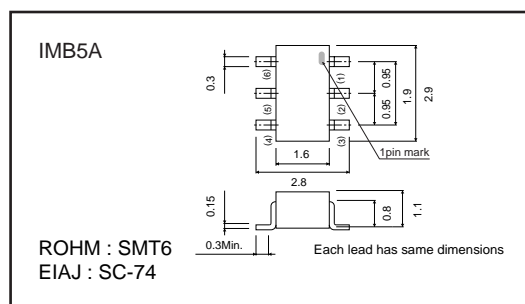


### ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V <sub>I(off)</sub>	-	-	-0.5	V	V <sub>CC</sub> =-5V, I <sub>O</sub> =-100μA
	V <sub>I(on)</sub>	-3	-	-		V <sub>O</sub> =-0.2V, I <sub>O</sub> =-5mA
Output voltage	V <sub>O(on)</sub>	-	-0.1	-0.3	V	I <sub>O</sub> =-10mA, I <sub>I</sub> =-0.5mA
Input current	I <sub>I</sub>	-	-	-0.36	mA	V <sub>I</sub> =-5V
Output current	I <sub>O(off)</sub>	-	-	-0.5	μA	V <sub>CC</sub> =-50V, V <sub>I</sub> =0V
DC current gain	G <sub>I</sub>	56	-	-	-	V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA
Transition frequency	f <sub>T</sub> *	-	250	-	MHz	V <sub>CE</sub> =-10V, I <sub>E</sub> =5mA, f=100MHz
Input resistance	R <sub>1</sub>	15.4	22	28.6	kΩ	-
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	0.8	1	1.2	-	-

\* Characteristics of built-in transistor.

### ●External dimensions (Unit : mm)



Transistors

●Electrical characteristics curves

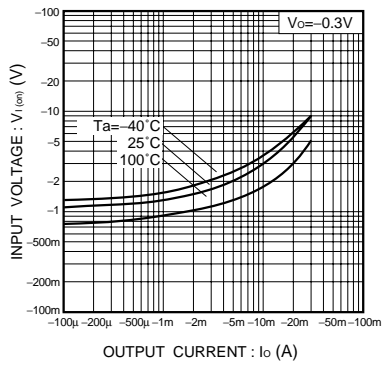


Fig.1 Input voltage vs. output current (ON characteristics)

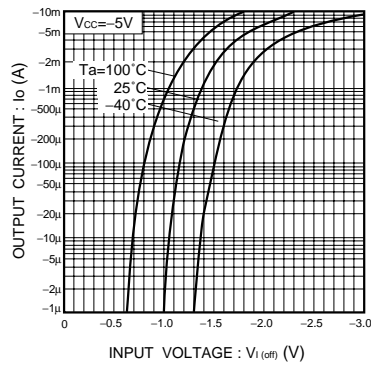


Fig.2 Output current vs. input voltage (OFF characteristics)

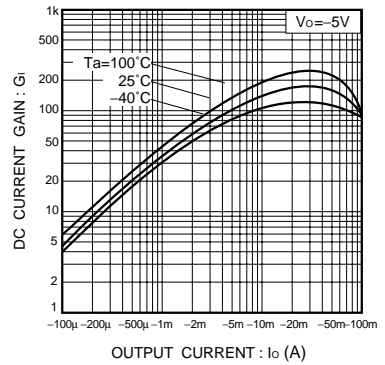


Fig.3 DC current gain vs. output current

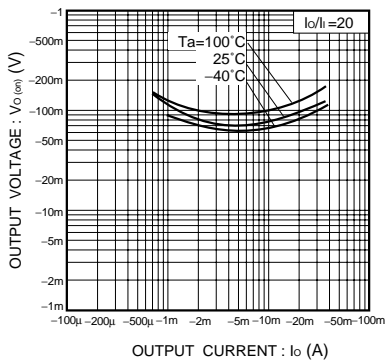


Fig.4 Output voltage vs. output current

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