

# General purpose (dual digital transistors)

## EMH25

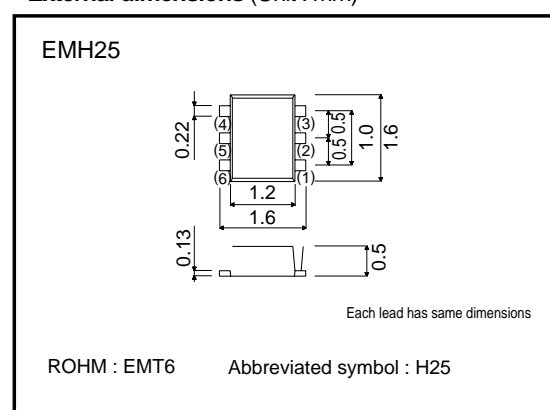
### ●Features

- 1) Two DTC143Z chips in a EMT package.
- 2) Mounting possible with EMT automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.
- 4) Mounting cost and area can be cut in half.

### ●Structure

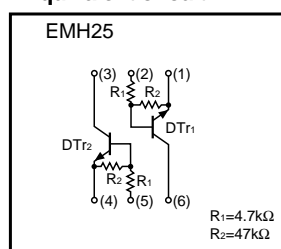
Epitaxial planar type  
NPN silicon transistor  
(Built-in resistor type)

### ●External dimensions (Unit : mm)



The following characteristics apply to both DTr<sub>1</sub> and DTr<sub>2</sub>.

### ●Equivalent circuit



### ●Packaging specifications

Type	Package	Taping
	Code	T2R
	Basic ordering unit (pieces)	8000
EMH25		○

## Transistors

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

Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>CC</sub>	50	V
Input voltage	V <sub>IN</sub>	30	V
		-5	
Output current	I <sub>O</sub>	100	mA
Collector current	I <sub>C</sub> (Max.)	100	mA
Power dissipation	P <sub>d</sub>	150 (TOTAL)	mW *1
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\*1 120mW per element must not be exceeded.

## ●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>	1.3	—	—		V <sub>O</sub> =0.3V, I <sub>O</sub> =5mA
Output voltage	V <sub>O(on)</sub>	—	0.1	0.3	V	I <sub>O</sub> /I <sub>I</sub> =5mA/0.25mA
Input current	I <sub>I</sub>	—	—	1.8	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>	80	—	—	—	V <sub>O</sub> =5V, I <sub>O</sub> =10mA
Input resistance	R <sub>I</sub>	3.29	4.7	6.11	kΩ	—
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	8	10	12	—	—
Transition frequency	f <sub>T</sub>	—	250	—	MHz	V <sub>CE</sub> =10V, I <sub>E</sub> =-5mA, f=100MHz *

\*Transition frequency of the device

## ●Electrical characteristic curves

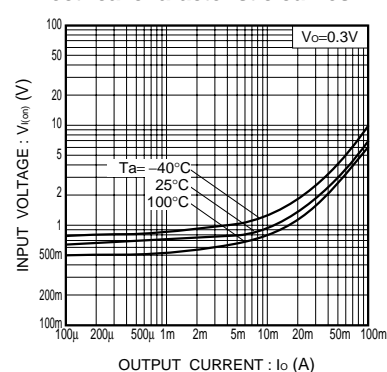


Fig.1 Input voltage vs. output current (ON characteristics)

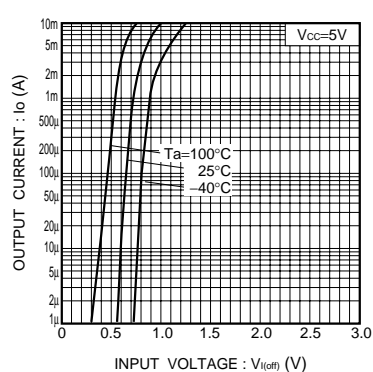


Fig.2 Output current vs. input voltage (OFF characteristics)

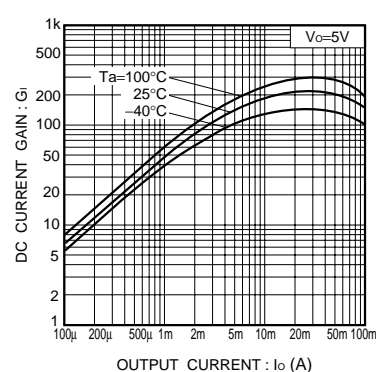


Fig.3 DC current gain vs. output current

## Transistors

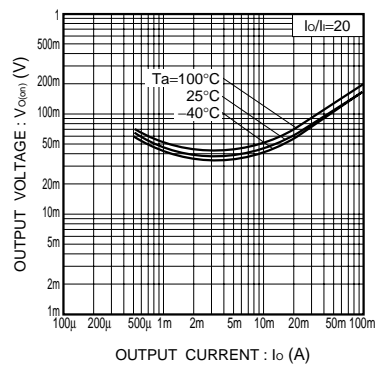


Fig.4 Output voltage vs. output current

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