

Transistors

General purpose (dual digital transistors)

EMH16

●Features

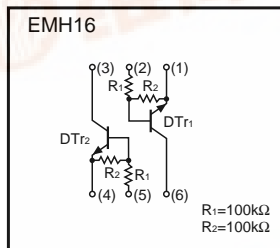
- 1) Two DTC115E chips in a EMT package.
- 2) Mounting possible with EMT automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.
- 4) Mounting cost and area can be cut in half.

●Structure

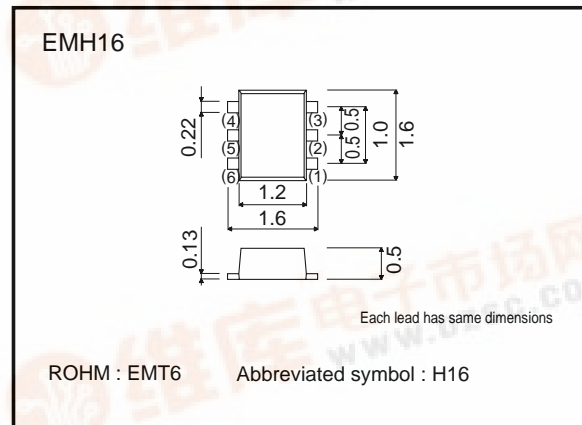
Epitaxial planar type
NPN silicon transistor
(Built-in resistor type)

The following characteristics apply to both DTr₁ and DTr₂.

●Equivalent circuit



●External dimensions (Unit : mm)



●Packaging specifications

Type	Package	Taping
	Code	T2R
	Basic ordering unit (pieces)	8000
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●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	50	V
Input voltage	V _{IN}	40	V
		-10	
Output current	I _O	20	mA
Collector current	I _{C (Max.)}	100	mA
Power dissipation	P _d	150 (TOTAL)	mW *1
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-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 _{I(off)}	-	-	0.5	V	V _{CC} =5V, I _O =100μA
	V _{I(on)}	3	-	-		V _O =0.3V, I _O =1mA
Output voltage	V _{O(on)}	-	0.1	0.3	V	I _O /I _I =5mA/0.25mA
Input current	I _I	-	-	0.15	mA	V _I =5V
Output current	I _{O(off)}	-	-	0.5	μA	V _{CC} =50V, V _I =0V
DC current gain	G _I	82	-	-	-	V _O =5V, I _O =10mA
Input resistance	R _I	70	100	130	kΩ	-
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	-	-
Transition frequency	f _T	-	250	-	MHz	V _{CE} =10V, I _E =-5mA, f=100MHz *

*Transition frequency of the device

●Electrical characteristic curves

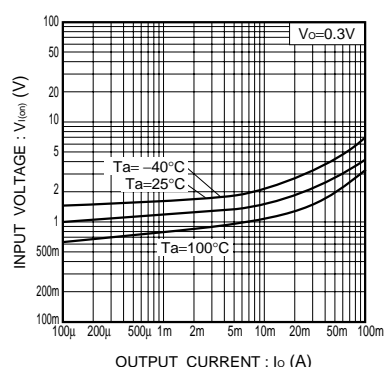


Fig.1 Input voltage vs. output current (ON characteristics)

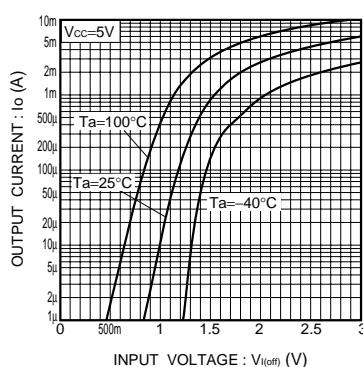


Fig.2 Output current vs. input voltage (OFF characteristics)

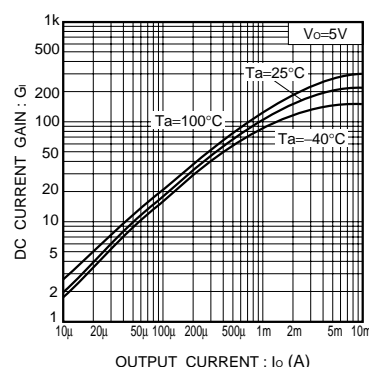


Fig.3 DC current gain vs. output current

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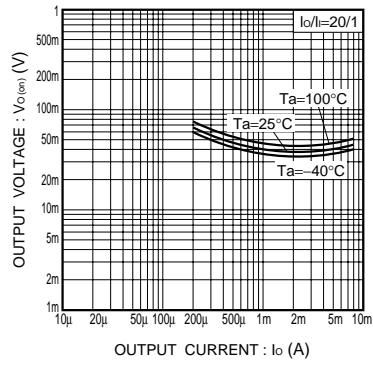


Fig.4 Output voltage vs. output current

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