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.

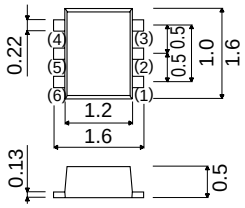
●**Structure**

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

The following characteristics apply to both DTr_1 and DTr_2.

●**External dimensions** (Unit : mm)

EMH16

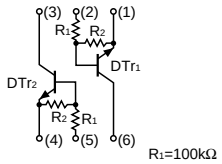


Each lead has same dimensions

ROHM : EMT6 Abbreviated symbol : H16

●**Equivalent circuit**

EMH16



R1=100kΩ
R2=100kΩ

●**Packaging specifications**

Type	Package	Taping
	Code	T2R
	Basic ordering unit (pieces)	8000
EMH16		○

●**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	Pd	150 (TOTAL)	mW ∗1
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−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_1	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**

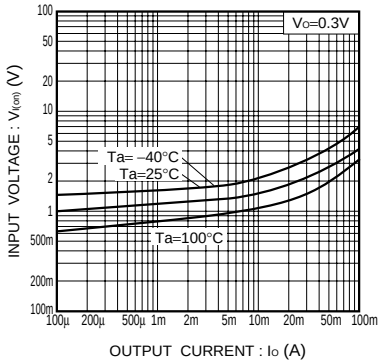


Fig.1 Input voltage vs. output current (ON characteristics)

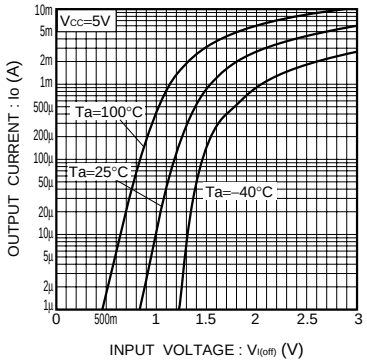


Fig.2 Output current vs. input voltage (OFF characteristics)

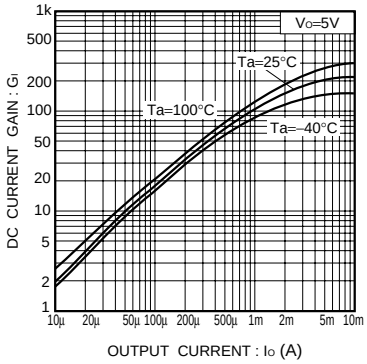


Fig.3 DC current gain vs. output current

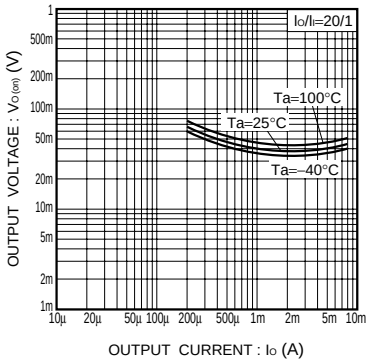


Fig.4 Output voltage vs. output current

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