

Transistors

●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Supply voltage		V _{CC}	50	V
Input voltage		V _{IN}	40	V
			-6	
Output current		I _O	70	mA
		I _{C (Max.)}	100	
Power dissipation	EMH9, UMH9N	P _d	150 (TOTAL)	mW
	IMH9A		300 (TOTAL)	
Junction temperature		T _J	150	°C
Storage temperature		T _{stg}	-55~+150	°C

*1 120mW per element must not be exceeded.

*2 200mW per element must not be exceeded.

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V _{I (off)}	—	—	0.3	V	V _{CC} =5V, I _O =100μA
	V _{I (on)}	1.4	—	—		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	—	—	0.88	mA	V _I =5V
Output current	I _{O (off)}	—	—	0.5	μA	V _{CC} =50V, V _I =0V
DC current gain	G _I	68	—	—	—	V _O =5V, I _O =5mA
Transition frequency	f _T	—	250	—	MHz	V _{CE} =10mA, I _E =-5mA, f=100MHz *
Input resistance	R _I	7	10	13	kΩ	—
Resistance ratio	R ₂ /R ₁	3.7	4.7	5.7	—	—

* Transition frequency of the device

●Electrical characteristic curves

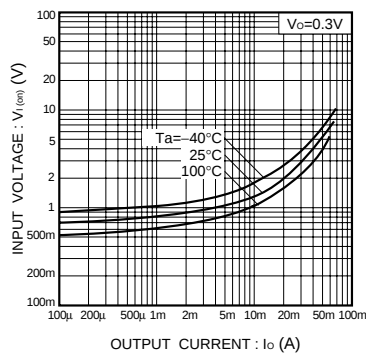


Fig.1 Input voltage vs. output current (ON characteristics)

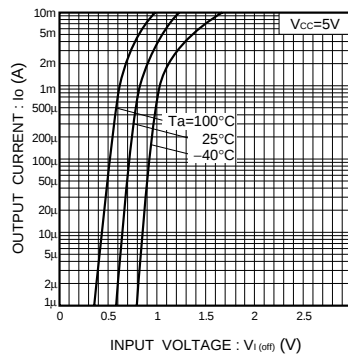


Fig.2 Output current vs. input voltage (OFF characteristics)

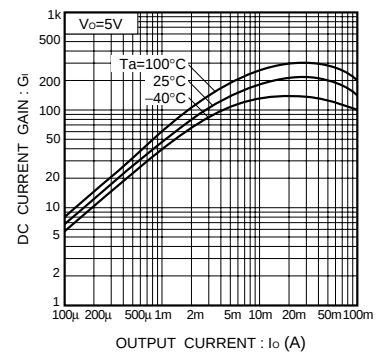


Fig.3 DC current gain vs. output current

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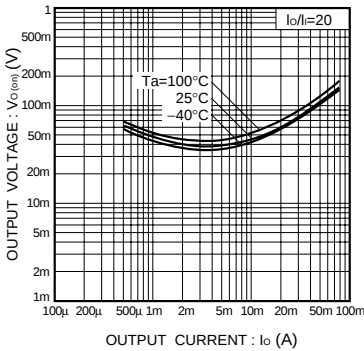


Fig.4 Output voltage vs. output current