



Micro Commercial Components



Micro Commercial Components  
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# UMH1N

## Digital Transistors

### Features

- Halogen free available upon request by adding suffix "-HF"
- Two DTC124E chip in a package
- Mounting possible with SOT-363 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

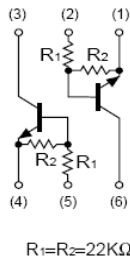
### Absolute maximum ratings @ 25 °C

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply voltage	50	V
V <sub>IN</sub>	Input voltage	-10~40	V
I <sub>O</sub>	Output current	30	mA
I <sub>C(MAX)</sub>	Collector Current	100	mA
P <sub>d</sub>	Power dissipation	150	mW
T <sub>j</sub>	Junction temperature	150	°C
T <sub>stg</sub>	Storage temperature	-55~150	°C

### Electrical Characteristics @ 25 °C

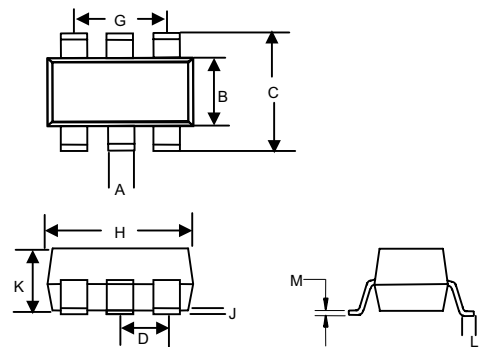
Symbol	Parameter	Min	Typ	Max	Unit
V <sub>I(off)</sub>	Input voltage (V <sub>CC</sub> =5V, I <sub>O</sub> =100µA)	---	---	0.5	V
V <sub>I(on)</sub>	Input voltage (V <sub>O</sub> =0.2V, I <sub>O</sub> =5mA)	3.0	---	---	V
V <sub>O(on)</sub>	Output voltage (I <sub>O</sub> /I <sub>I</sub> =10mA/0.5mA)	---	0.1	0.3	V
I <sub>I</sub>	Input current (V <sub>I</sub> =5V)	---	---	0.36	mA
I <sub>O(off)</sub>	Output current (V <sub>CC</sub> =50V, V <sub>I</sub> =0)	---	---	0.5	µA
G <sub>I</sub>	DC current gain (V <sub>O</sub> =5V, I <sub>O</sub> =5mA)	56	---	---	
R <sub>1</sub>	Input resistance	15.4	22	28.6	KΩ
R <sub>2</sub> /R <sub>1</sub>	Resistance ratio	0.8	1.0	1.2	
f <sub>T</sub>	Transition frequency (V <sub>CE</sub> =10V, I <sub>E</sub> =-5mA, f=100MHz)	---	250	---	MHz

### Equivalent circuit



Marking :H1

### SOT-363



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.014	0.15	0.35	
B	.045	.053	1.15	1.35	
C	.085	.096	2.15	2.45	
D	.026		0.65Nominal		
G	.047	.055	1.20	1.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.043	0.90	1.10	
L	.010	.018	0.26	0.46	
M	.003	.006	0.08	0.15	

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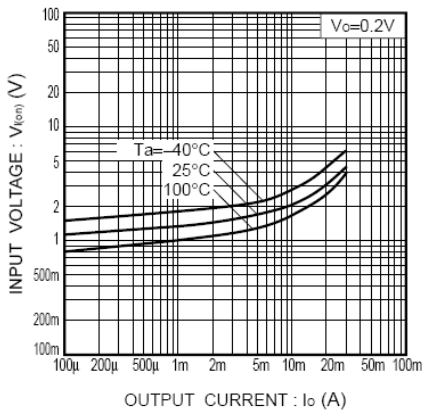


Fig.1 Input voltage vs. output current (ON characteristics)

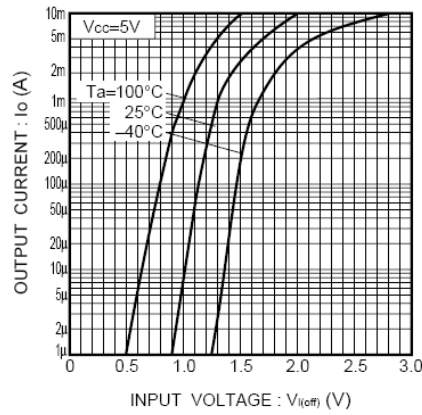


Fig.2 Output current vs. input voltage (OFF characteristics)

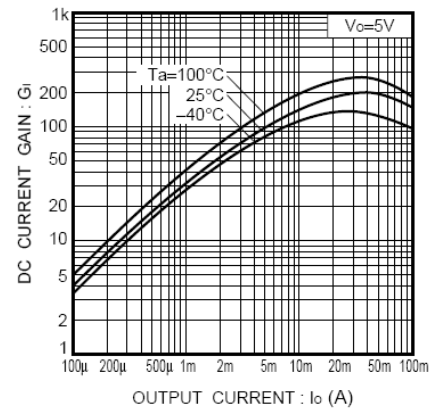


Fig.3 DC current gain vs. output current

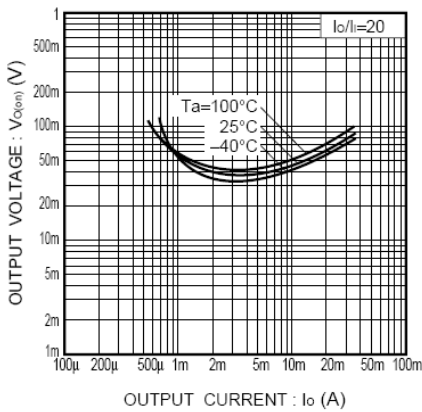


Fig.4 Output voltage vs. output current



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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