



Micro Commercial Components

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# UMH2N

## Features

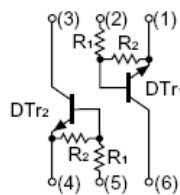
- Two DTC144E chips in one package
- Mounting possible with SOT-363 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Marking: H2

## Mechanical Data

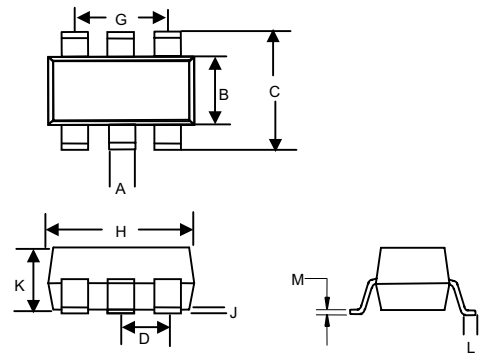
- Case: SOT-363, Molded Plastic
- Polarity: See Diagram (NPN\*2)

### Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Parameter	Value	Units
<b>OFF CHARACTERISTICS</b>			
V <sub>CC</sub>	Supply Voltage	50	V
V <sub>i</sub>	Input voltage	-10 to +40	V
I <sub>C(MAX)</sub>	Output 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



## 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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## Electrical Characteristics (T<sub>a</sub>=25°C)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Input turn-on voltage	V <sub>i(on)</sub>	V <sub>CC</sub> =0.3V, I <sub>O</sub> =2mA	3			V
Input cut-off voltage	V <sub>i(off)</sub>	V <sub>CC</sub> =5V, I <sub>O</sub> =100μA			0.5	V
Output voltage	V <sub>O(on)</sub>	I <sub>O</sub> =10mA, I <sub>i</sub> =0.5mA			0.3	V
Input cut-off current	I <sub>i</sub>	V <sub>i</sub> =5V			0.18	mA
Output cut-off current	I <sub>O(off)</sub>	V <sub>CC</sub> =50V, V <sub>i</sub> =0			0.5	μA
DC current gain	G <sub>i</sub>	V <sub>O</sub> =5V, I <sub>O</sub> =5mA	68			
Transition frequency	f <sub>T</sub>	V <sub>O</sub> =10V, I <sub>O</sub> =5mA, f=100MHz		250		MHz
Input resistance	R <sub>1</sub>		32.9		61.1	KΩ
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>		0.8		1.2	

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## Typical Characteristics

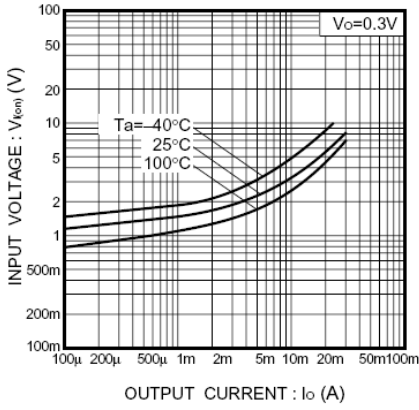


Fig.1 Input voltage vs. output current (ON characteristics)

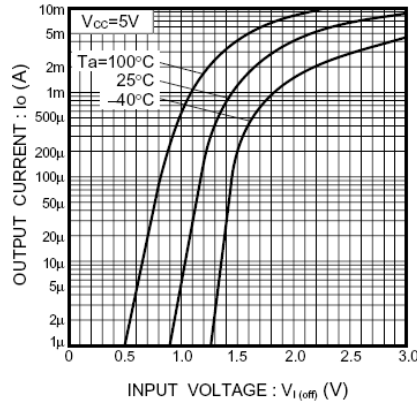


Fig.2 Output current vs. input voltage (OFF characteristics)

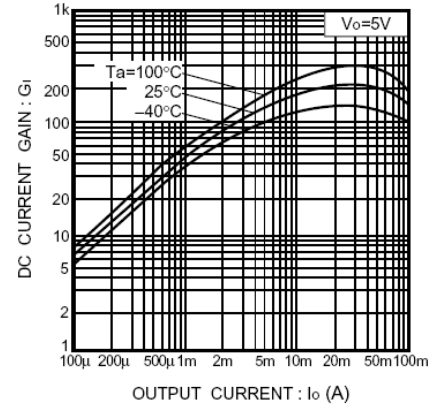


Fig.3 DC current gain vs. output current

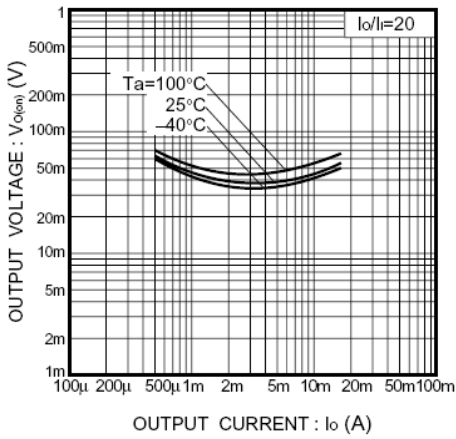


Fig.4 Output voltage vs. output current



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## Ordering Information

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