

## Features

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- Only the on/off conditions need to be set for operation, making the circuit design easy
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- AEC-Q101 Qualified
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

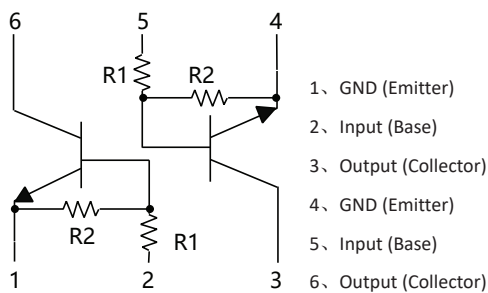
## Maximum Ratings @ 25°C Unless Otherwise Specified

- Thermal Resistance: 833°C/W Junction to Ambient

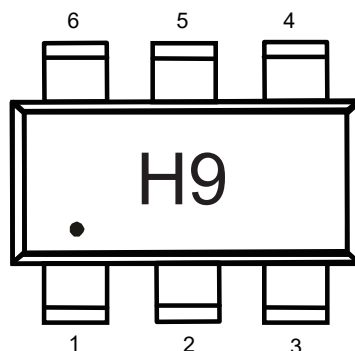
Parameter	Symbol	Value	Unit
Supply Voltage	$V_{CC}$	50	V
Input Voltage	$V_{IN}$	-6~+40	V
Output Current	$I_O$	100	mA
Power Dissipation	$P_D$	150	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

## Internal Structure

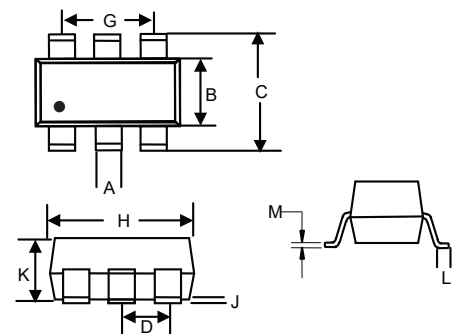


## Device Marking



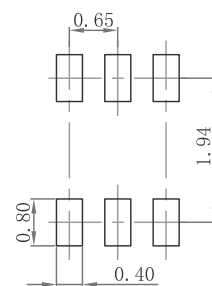
# Dual NPN Digital Transistor

## SOT-363



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

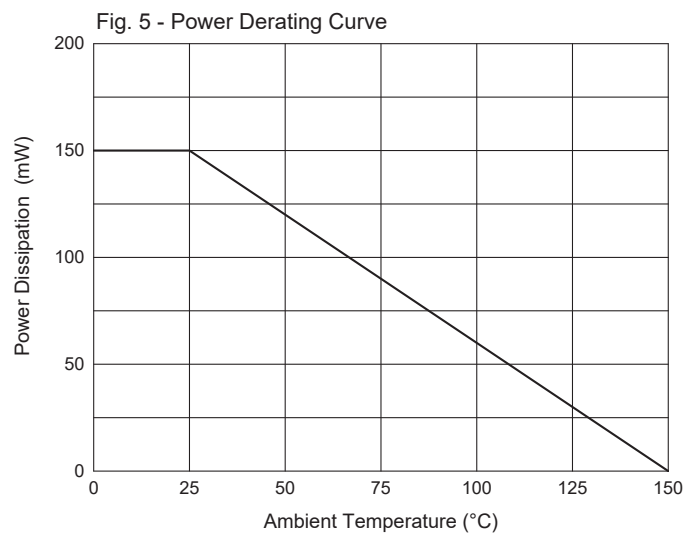
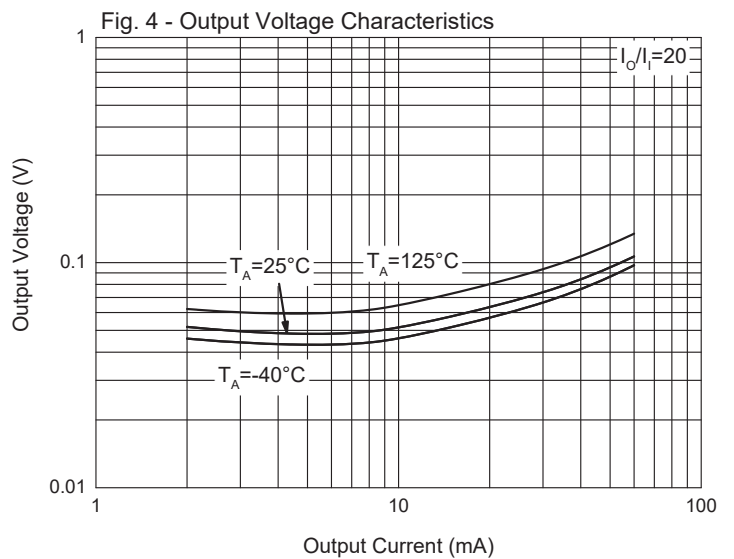
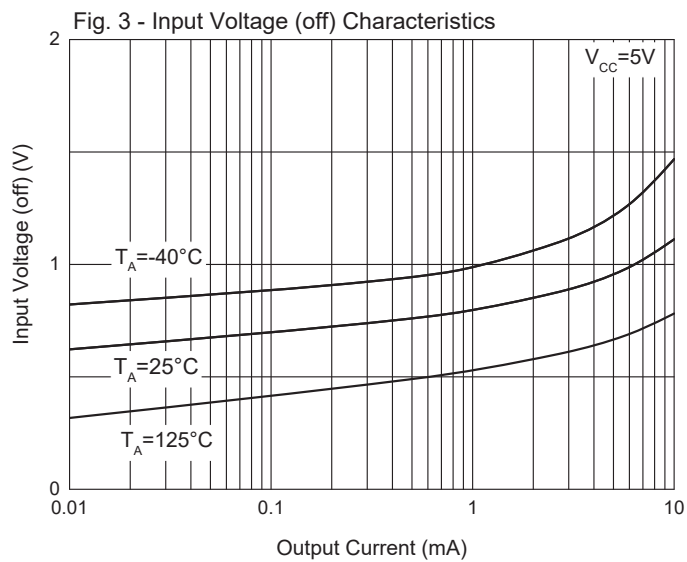
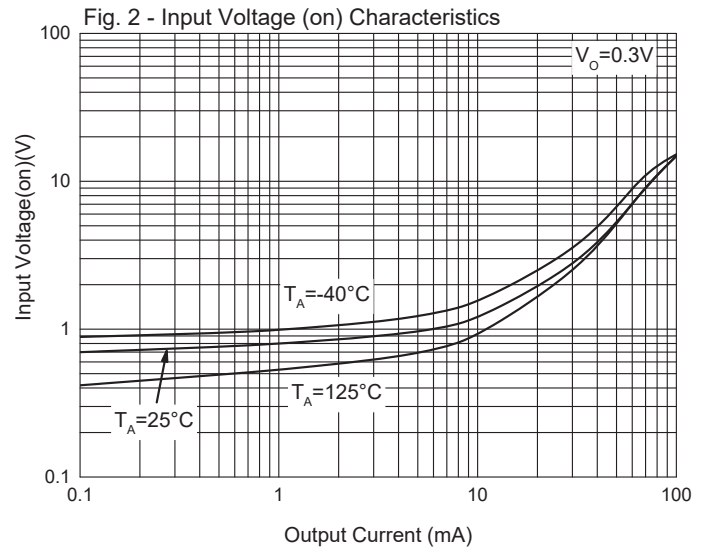
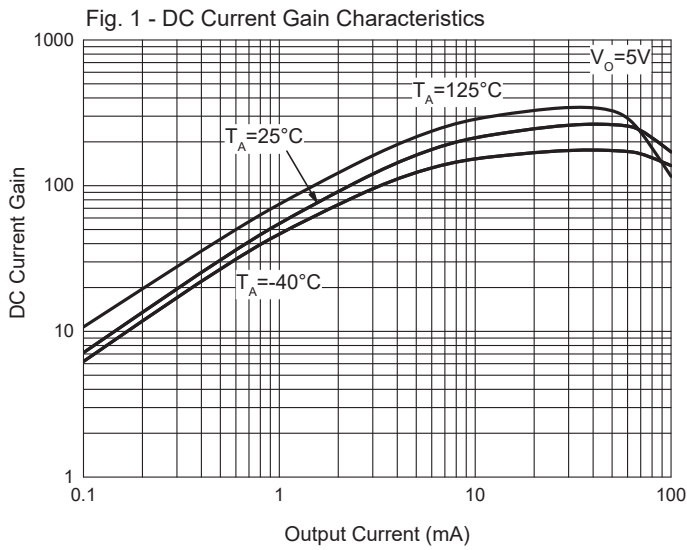
## Suggested Solder Pad Layout



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Input Voltage	$V_{I(off)}$	0.3	---	---	V	$V_{CC}=5V, I_O=100\mu A$
	$V_{I(on)}$	---	---	1.4	V	$V_O=0.3V, I_O=1mA$
Output Voltage	$V_{O(on)}$	---	---	0.3	V	$I_O=5mA, I_I=0.25mA$
Input Current	$I_I$	---	---	0.88	mA	$V_I=5V$
Output Current	$I_{O(off)}$	---	---	0.5	$\mu A$	$V_{CC}=50V, V_I=0$
DC Current Gain	$G_I$	68	---	---		$V_O=5V, I_O=5mA$
Input Resistance	$R_1$	7	10	13	K $\Omega$	
Resistance Ratio	$R_2/R_1$	3.7	4.7	5.7		
Transition Frequency	$f_T$	---	250	---	MHz	$V_{CE}=10V, I_C=5mA, f=100MHz$

## Curve Characteristics



## Ordering Information

Device	Packing
UMH9NHE3-TP	Tape&Reel:3Kpcs/Reel

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