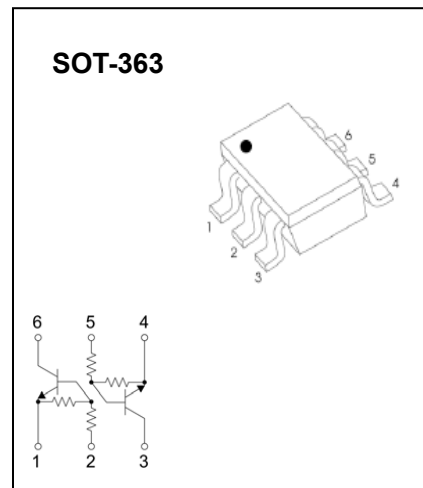


Digital Transistors (Built-in Resistors)

UMH9N Dual Digital Transistors (NPN+NPN)

FEATURES

- Two DTC114Y chips in a package
- Transistor elements are independent, eliminating interference
- Mounting cost and area can be cut in half



MARKING: H9

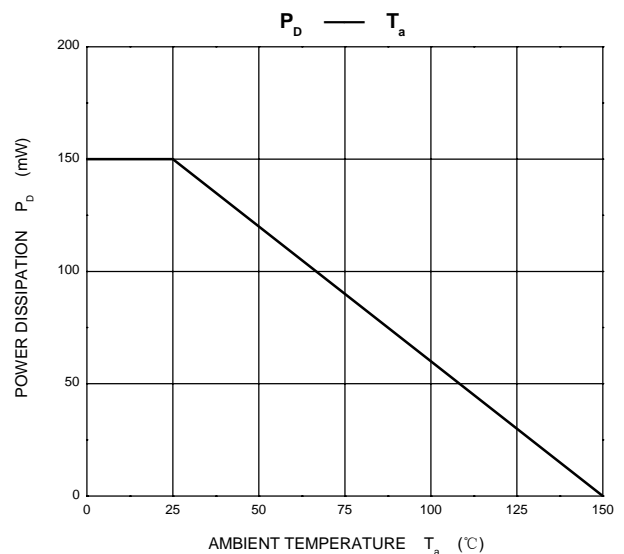
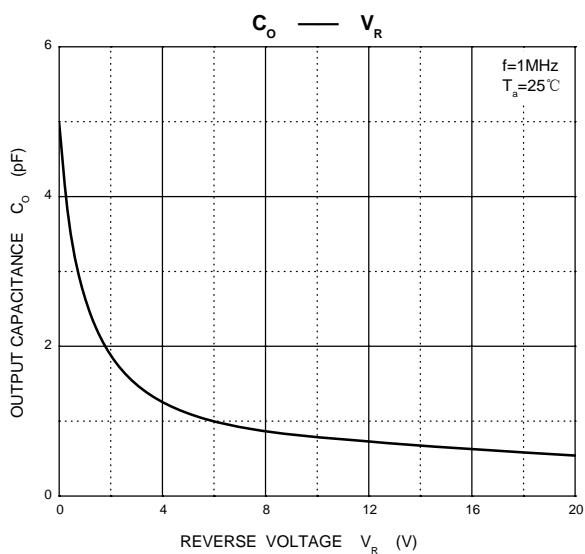
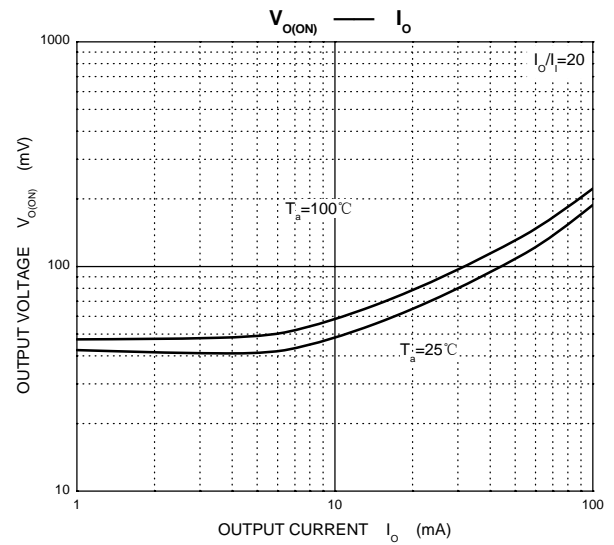
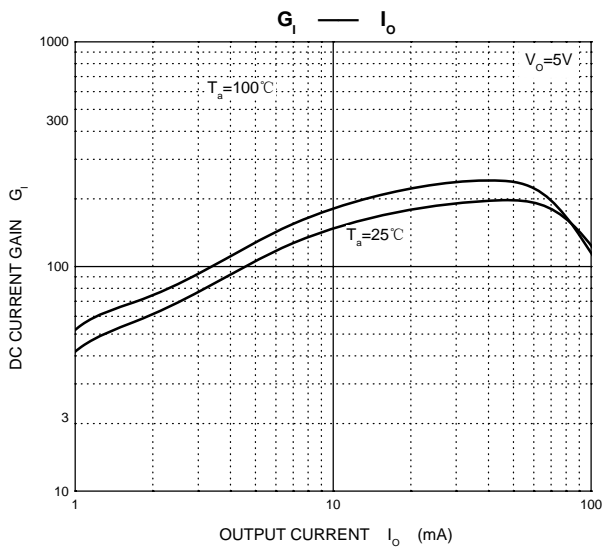
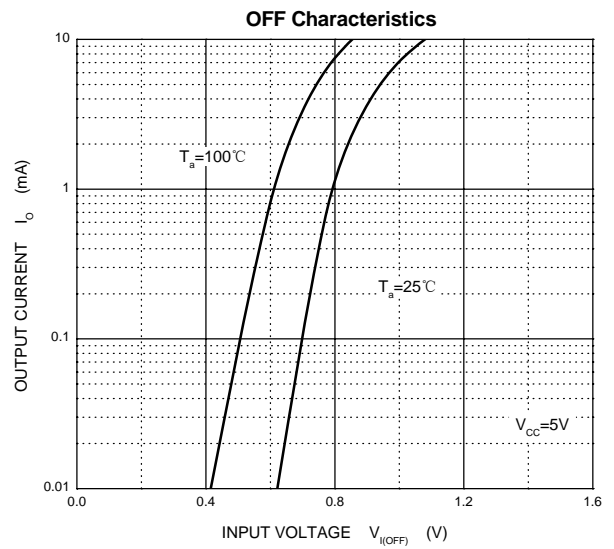
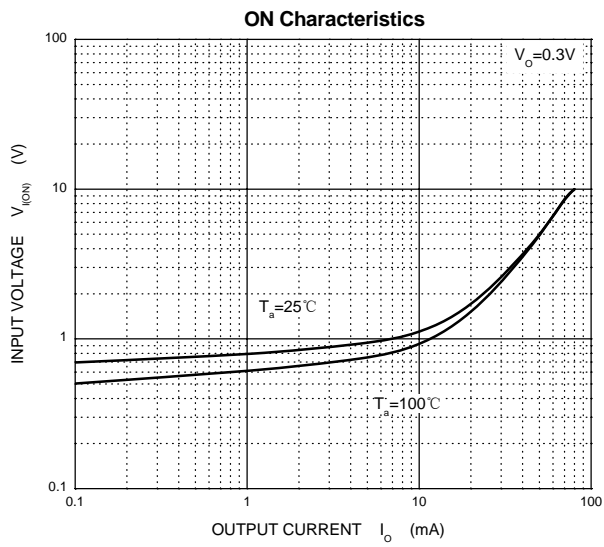
Absolute maximum ratings(Ta=25°C)

Parameter	Symbol	Value	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-6~40	V
Output current	I_o	70	mA
	$I_{C(MAX)}$	100	
Power dissipation	P_d	150(TOTAL)	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

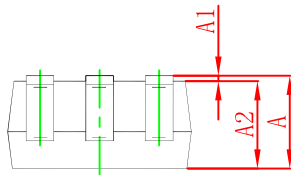
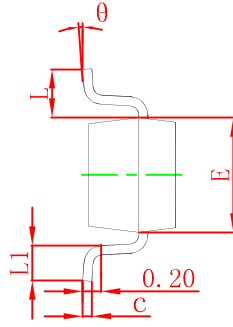
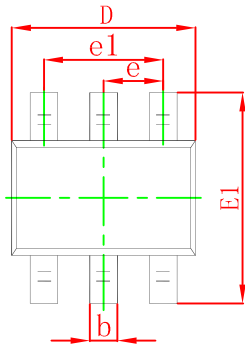
Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	0.3			V	$V_{CC}=5V, I_o=100\mu A$
	$V_{I(on)}$			1.4		$V_o=0.3V, I_o=1mA$
Output voltage	$V_{O(on)}$			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	$V_{CC}=50V, V_i=0$
DC current gain	G_i	68				$V_o=5V, I_o=5mA$
Input resistance	R_1	7	10	13	K Ω	
Resistance ratio	R_2/R_1	3.7	4.7	5.7		
Transition frequency	f_T		250		MHz	$V_{CE}=10V, I_E=-5mA, f=100MHz$

Typical Characteristics

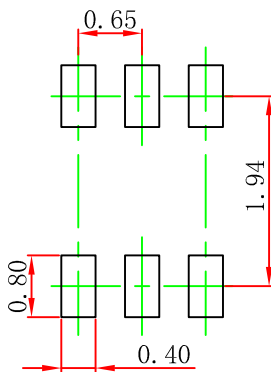


SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

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