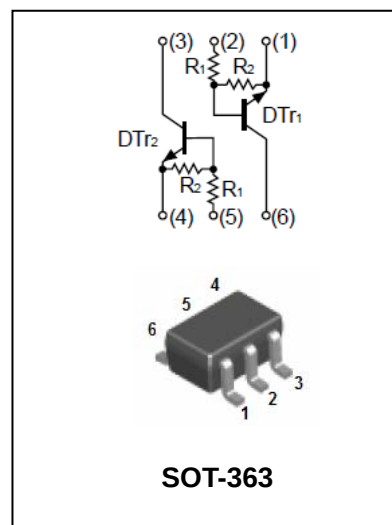


General purpose(dual digital transistors)

UMH9N

FEATURES

- Two DTC114Ys chips in SOT-363 package.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area can be cut in half.



APPLICATIONS

- Dual NPN small signal surface mount transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
UMH9N	H9	SOT-363

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	50	V
V_{IN}	Input Voltage	40	V
I_O	Output Current	70	mA
$I_{C(MAX.)}$	Collector Current	100	mA
P_c	Power Dissipation (NOTE 1)	150	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	°C

NOTE 1: 120mW per element must not be exceeded.

General purpose(dual digital transistors)

UMH9N

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Voltage	$V_{I(off)}$	$V_{CC}=5V, I_O=100\mu A$			0.3	V
	$V_{I(on)}$	$V_O=0.3V, I_I=1mA$	1.4			V
Output Voltage	$V_{O(on)}$	$I_O / I_I=5mA / 0.25mA$		0.1	0.3	V
Input Current	I_I	$V_I=5V$			0.88	mA
Output Current	$I_{O(off)}$	$V_{CC}=50V, V_I=0V$			0.5	μA
DC Current Gain	G_I	$V_O=5V, I_O=5mA$	68			
Input Resistor	R_1		7	10	13	k Ω
Resistance Ratio	R_2/R_1		3.7	4.7	5.7	
Gain-Bandwidth Product (NOTE 2)	f_T	$V_{CE}=10V, I_E=5mA, f=100MHz$		250		MHz

NOTE 2: Transition frequency of the device.

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

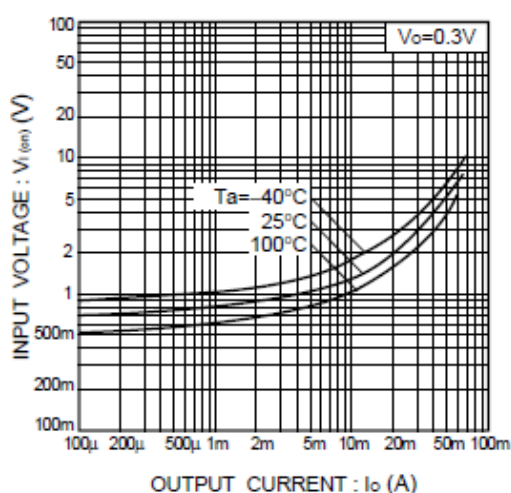


Fig.1 Input voltage vs. output current (ON characteristics)

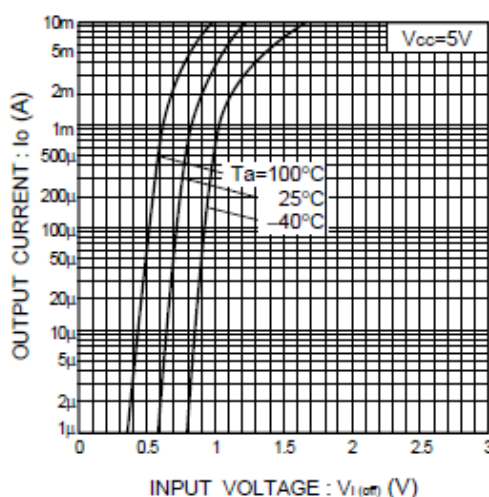


Fig.2 Output current vs. input voltage (OFF characteristics)

General purpose(dual digital transistors)

UMH9N

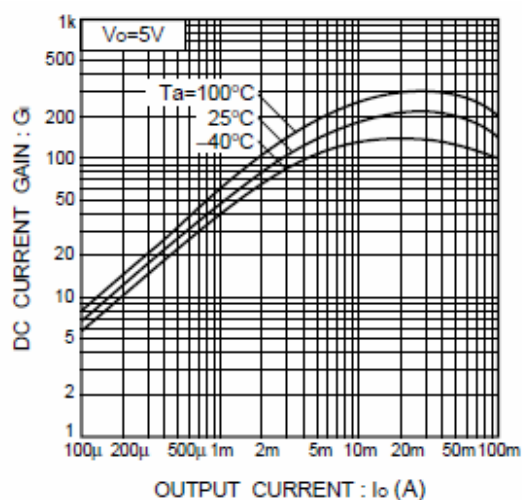


Fig.3 DC current gain vs. output current

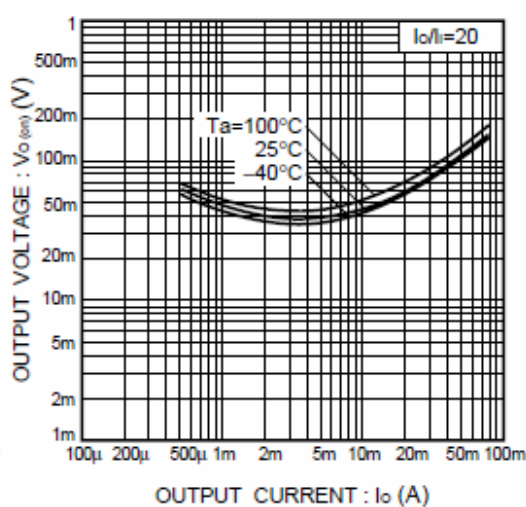
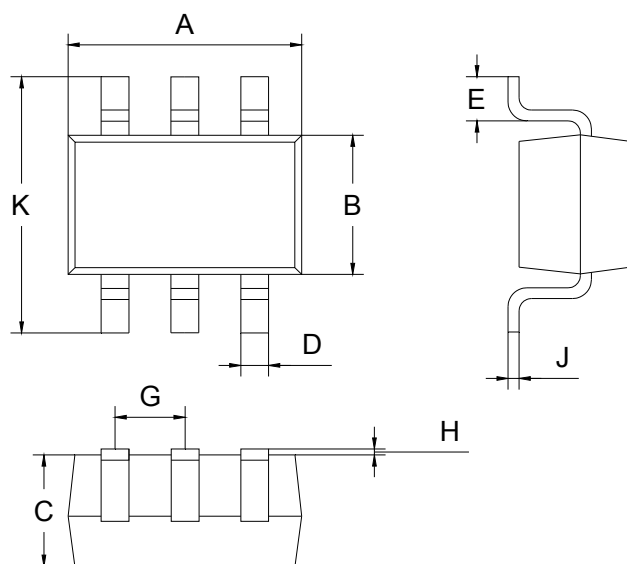


Fig.4 Output voltage vs. output current

PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



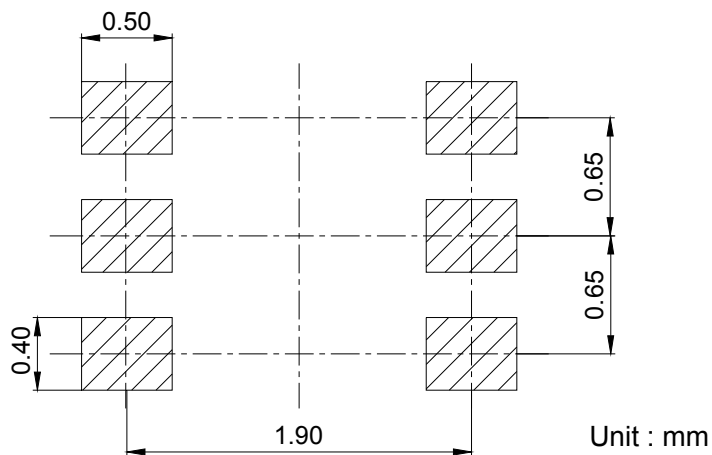
SOT-363		
Dim	Min	Max
A	2.00	2.20
B	1.15	1.35
C	0.95 Typical	
D	0.25 Typical	
E	0.25	0.40
G	0.60	0.70
H	0.02	0.10
J	0.10 Typical	
K	2.2	2.4
All Dimensions in mm		



General purpose(dual digital transistors)

UMH9N

SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
UMH9N	SOT-363	3000/Tape&Reel