

Digital Transistor (Dual Digital Transistors for Inverter Drive)

UMD9N / IMD9A

●Features

1) DTA114Y and DTC114Y transistors are built-in a SMT package.

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	-6~+40	V
Output current	I_O	70	mA
Collector current	$I_{C(MAX)}$	100	mA
Power dissipation	UMD9N	P_d 150(TOTAL)	mW *1
	IMD9A	300(TOTAL)	mW *2
Storage temperature	T_{stg}	-55~+150	°C

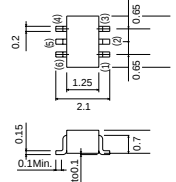
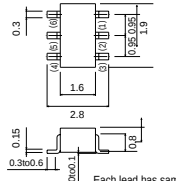
*1 120mW per element must not be exceeded. PNP type negative symbols have been omitted.

*2 200mW per element must not be exceeded. PNP type negative symbols have been omitted.

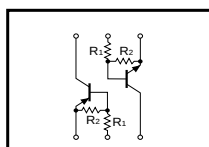
●Package, marking, and packaging specifications

Part No.	UMD9N	IMD9A
Package	UMT6	SMT6
Marking	D9	D9
Code	TR	T108
Basic ordering unit (pieces)	3000	3000

●External dimensions (Units : mm)

UMD9N	
ROHM : UMT6 EIAJ : SC-88	
IMD9A	
ROHM : SMT6 EIAJ : SC-74	

●Circuit schematic



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	-	-	0.3	V	$V_{CC}=5V$, $I_O=100mA$
	$V_{I(on)}$	1.4	-	-	V	$V_O=0.3V$, $I_I=1mA$
Output voltage	$V_{O(on)}$	-	0.1	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	mA	$V_{CC}=50V$, $V_I=0V$
DC current gain	G_I	68	-	-	-	$I_O=5mA$, $V_O=5V$
Input resistance	R_1	7	10	13	kW	-
Resistance ratio	R_2/R_1	3.7	4.7	5.7	-	-

PNP type negative symbols have been omitted.