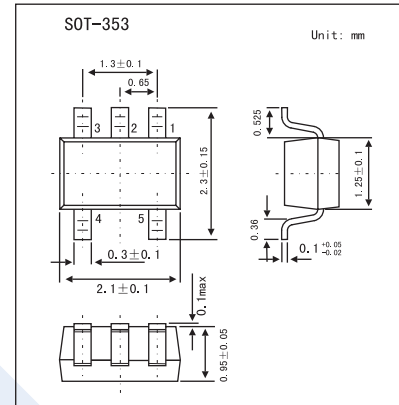


Complex Digital Transistors

UMA1N

■ Features

- Mounting Cost and Area Can Be Cut In Half.
- Emitter-common Type.
- PNP Epitaxial Planar Silicon Transistor.



■ Absolute Maximum Ratings Ta = 25°C

< For Tr1 and Tr2 in common >

Parameter	Symbol	Rating	Unit
Supply Voltage	V _{CC}	-50	V
Input Voltage	V _{IN}	-40 to +10	V
Output Current	I _O	-30	mA
Collector Current	I _{C(Max)}	-100	
Power Dissipation	P _D *	150	mW
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

* 120mW per element must not be exceeded.

■ Electrical Characteristics Ta = 25°C

< For Tr1 and Tr2 in common >

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Input Voltage	V _{I(off)}	V _{CC} = -5V, I _O = -100 μ A			-0.5	V
	V _{I(on)}	V _O = -0.2V, I _O = -5mA	-3			
Output Voltage	V _{O(on)}	I _O /I _I = -10mA/-0.5mA		-0.1	-0.3	V
Input Current	I _I	V _I = -5V			-0.36	mA
Output Current	I _{O(off)}	V _{CC} = -50V, V _I = 0V			-0.5	μ A
DC Current Gain	G _I	V _O = -5V, I _O = -5mA	56			
Input Resistance	R ₁		15.4	22	28.6	k Ω
Resistance Ratio	R ₂ /R ₁		0.8	1	1.2	
Transistion Frequency	f _r *	V _{CE} = -10V, I _E = 5mA, f = 100MHz		250		MHz

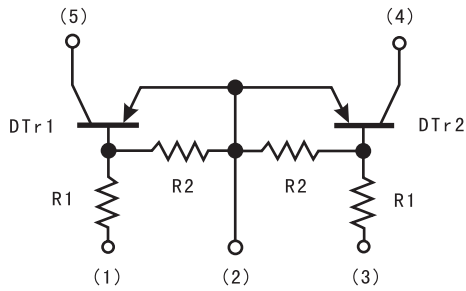
* Characteristics of built-in transistor

■ Marking

Marking	A1
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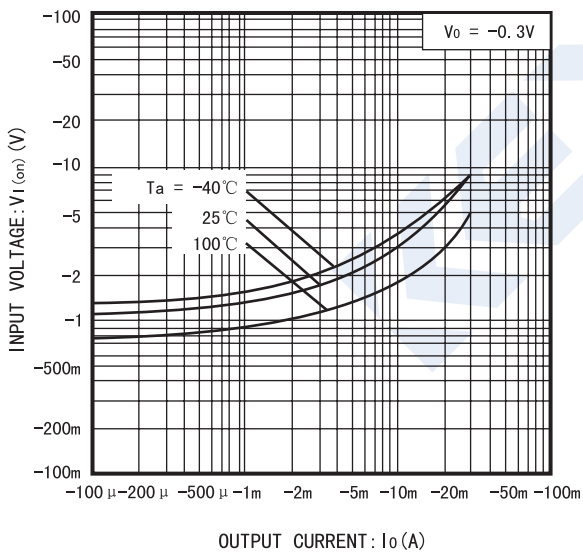
Equivalent Circuit



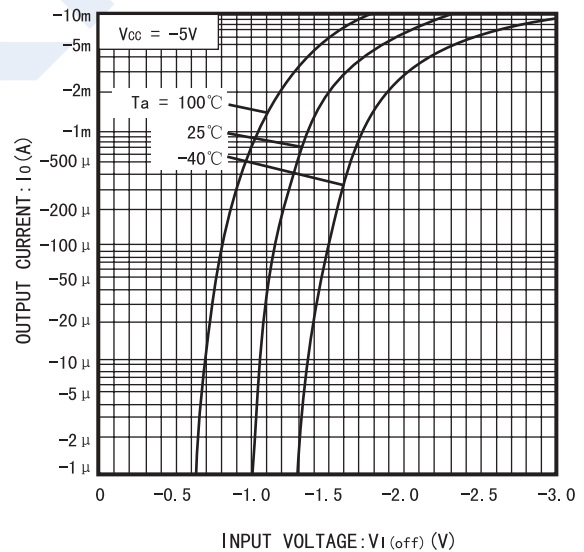
$R1 = R2 = 22k\ \Omega$

- (1) IN
- (2) GND
- (3) IN
- (4) OUT
- (5) OUT

Electrical Characteristics Curves

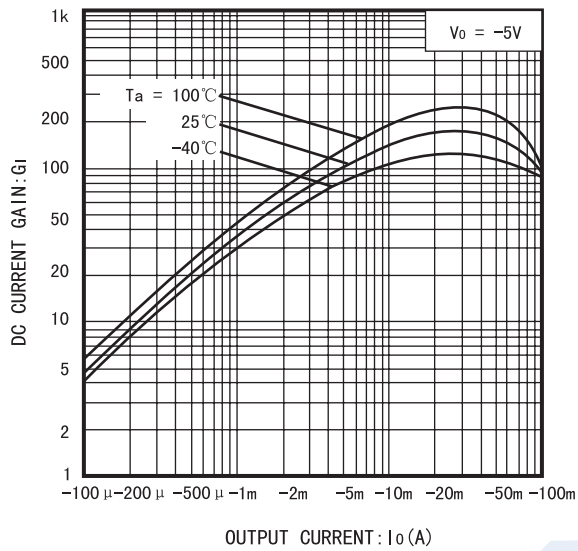


Input voltage vs. output current (ON characteristics)

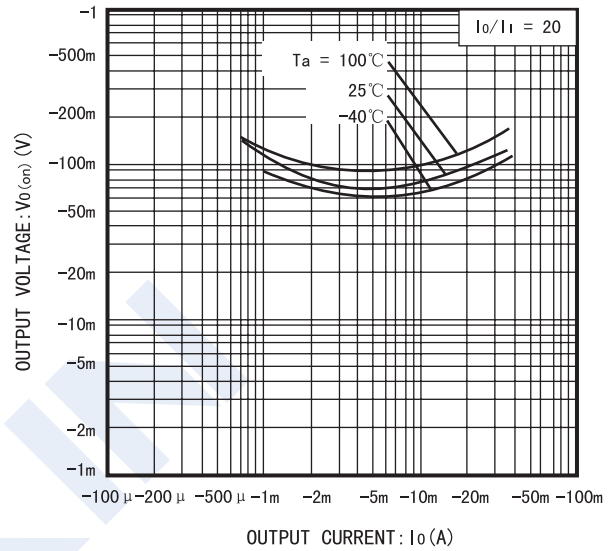


Output current vs. input voltage (OFF characteristics)

UMA1N



DC current gain vs. Output current



Output voltage vs. Output current