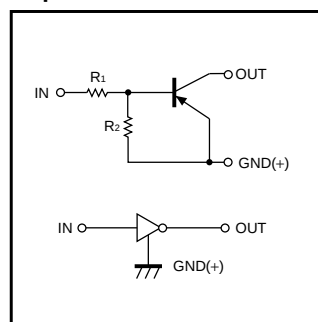


**DTA114EM / DTA114EE / DTA114EUA /
DTA114ECA / DTA114EKA / DTA114ESA**

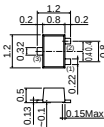
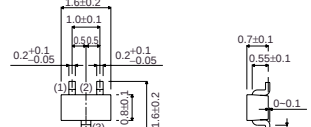
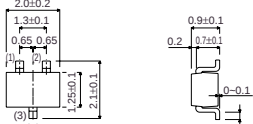
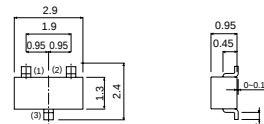
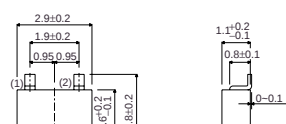
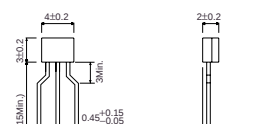
- Equivalent circuit

- 1) Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit).
- 2) The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- 3) Only the on/off conditions need to be set for operation, making device design easy.



PNP digital transistor (Built-in resistor type)

●External dimensions (Units : mm)

DTA114EM  ROHM : VMT3 Abbreviated symbol : 14 (1) IN (2) GND (3) OUT	DTA114EE  ROHM : EMT3 Abbreviated symbol : 14 (1) GND (2) IN (3) OUT
DTA114EUA  ROHM : UMT3 EIAJ : SC-70 All terminals have same dimensions Abbreviated symbol : 14 (1) GND (2) IN (3) OUT	DTA114ECA  ROHM : SST3 Each lead has same dimensions Abbreviated symbol : 14 (1) GND (2) IN (3) OUT
DTA114EKA  ROHM : SMT3 EIAJ : SC-59 All terminals have same dimensions Abbreviated symbol : 14 (1) GND (2) IN (3) OUT	DTA114ESA  ROHM : SPT EIAJ : SC-72 (1) GND (2) OUT (3) IN

DTA114EM / DTA114EE / DTA114EUA DTA114ECA / DTA114EKA / DTA114ESA

Transistors

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits(DTA114E□)						Unit
		M	E	UA	CA	KA	SA	
Supply voltage	V _{CC}	-50						V
Input voltage	V _{IN}	-40~+10						V
Output current	I _O	-50						mA
	I _{C(Max.)}	-100						
Power dissipation	P _d	150		200			300	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)}	-	-	-0.5	V	V _{CC} =-5V, I _O =-100μA
	V _{I(on)}	-3	-	-		V _O =-0.3V, I _O =-10mA
Output voltage	V _{O(on)}	-	-	-0.3	V	I _O /I _I =-10mA/-0.5mA
Input current	I _I	-	-	-0.88	mA	V _I =-5V
Output current	I _{O(off)}	-	-	-0.5	μA	V _{CC} =-50V, V _I =0V
DC current gain	G _I	30	-	-	-	V _O =-5V, I _O =-5mA
Input resistance	R _I	7	10	13	kΩ	-
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	-	-
Transition frequency	f _T	-	250	-	MHz	V _{CE} =-10V, I _E =5mA, f=100MHz *

* Transition frequency of the device

●Packaging specifications

Type	Package	VMT3	EMT3	UMT3	SST3	SMT3	SPT
	Packaging type	Taping	Taping	Taping	Taping	Taping	Taping
	Code	T2L	TL	T106	T116	T146	TP
	Basic ordering unit (pieces)	8000	3000	3000	3000	3000	5000
DTA114EM		○	-	-	-	-	-
DTA114EE		-	○	-	-	-	-
DTA114EUA		-	-	○	-	-	-
DTA114ECA		-	-	-	○	-	-
DTA114EKA		-	-	-	-	○	-
DTA114ESA		-	-	-	-	-	○

●Electrical characteristic curves

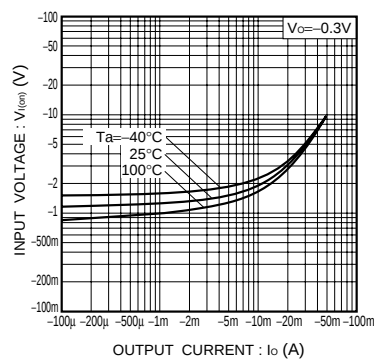
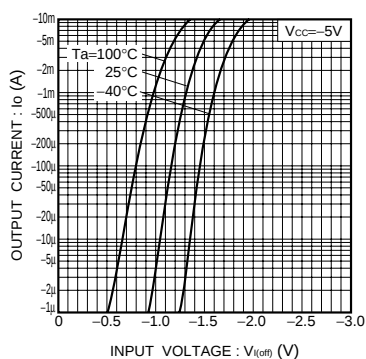
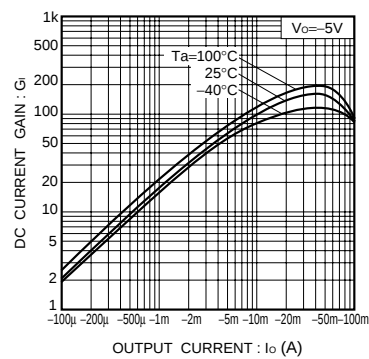
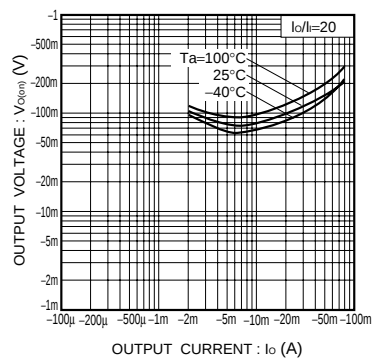
Fig.1 Input voltage vs. output current
(ON characteristics)Fig.2 Output current vs. input voltage
(OFF characteristics)Fig.3 DC current gain vs. output
current

Fig.4 Output voltage vs. output current

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