

DTA144VUA / DTA144VKA / DTA144VSA

- 1) Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors.
- 2) The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input, and parasitic effects are almost completely eliminated.
- 3) Only the on / off conditions need to be set for operation, making device design easy.
- 4) Higher mounting densities can be achieved.

The top diagram shows a BJT voltage follower circuit. The input terminal 'IN' is connected to the base of an NPN transistor through a resistor R_1 . The emitter is connected to ground, labeled 'GND(+)', through a resistor R_2 . The output terminal 'OUT' is connected directly to the collector of the transistor.

The bottom diagram shows an op-amp voltage follower circuit. The input terminal 'IN' is connected to the non-inverting input of an operational amplifier. The output terminal 'OUT' is connected directly back to the inverting input, forming a voltage follower configuration. The op-amp is powered by a ground connection labeled 'GND(+)'.

DTA144VUA

Top view dimensions: 0.3, 1.25, 2.1, 0.65, 0.05, 1.3, 2.0, 0.1, 0.1.

Side view dimensions: 0.15, 0.2, 0.7, 0.9, 0.1, 0.4, 0.6.

Each lead has same dimensions

ROHM : UMT3
EIAJ : SC-70

DTA144VKA

Top view dimensions: 0.4, 1.6, 2.8, 0.95, 0.95, 1.9, 2.9, 0.3, 0.3, 0.3.

Side view dimensions: 0.15, 0.8, 1.1, 0.3, 0.6, 0.6.

Each lead has same dimensions

ROHM : SMT3
EIAJ : SC-59

DTA144VSA

Top view dimensions: 3, 4, 2.5, 5, 0.45, 0.5, 0.45, 2 Min, (15 Min).

Side view dimensions: 0.5, 0.45.

(1) Emitter
(2) Collector
(3) Base

Taping specifications

ROHM : SPT
EIAJ : SC-72

Parameter		Symbol	Limits	Unit
Supply voltage		V _{CC}	-50	V
Input voltage		V _I	-40~+15	V
Output current		I _O	-30	mA
		I _{C(Max)}	-10	
Power dissipation	DTA144VUA / DTA144VKA	Pd	200	mW
	DTA144VSA		300	
Junction temperature		T _J	150	°C
Storage temperature		T _{Stg}	-55~+150	°C

Type	DTA144VUA	DTA144VKA	DTA144VSA
Package	UMT3	SMT3	SPT
Marking	156	E56	–
Packaging code	T106	T146	TP
Basic ordering unit (pieces)	3000	3000	5000

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	—	—	−1	V	$V_{CC} = -5V$, $I_O = -100\mu A$
	$V_{I(on)}$	−6	—	—		$V_O = -0.3V$, $I_O = -2mA$
Output voltage	$V_{O(on)}$	—	−0.1	−0.3	V	$I_O = -10mA$, $I_L = -0.5mA$
Input current	I_i	—	—	−0.16	mA	$V_i = -5V$
Output current	$I_{O(off)}$	—	—	−0.5	μA	$V_{CC} = -50V$, $V_i = 0V$
DC current gain	G_i	33	—	—		$I_O = -5mA$, $V_O = -5V$
Input resistance	R_i	32.9	47	61.1	k Ω	—
Resistance ratio	R_2/R_1	0.17	0.21	0.26	—	—
Transition frequency	f_T	—	250	—	MHz	$V_{CE} = -10V$, $I_E = 5mA$, $f = 100MHz$

* Transition frequency of the device.