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### DTA124EKA

## **Features**

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

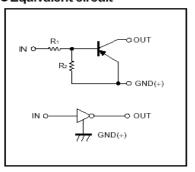
### Absolute maximum ratings @ $25^{\circ}$

Symbol	Parameter	Min	Тур	Max	Unit
$V_{CC}$	Supply voltage		-50		V
$V_{IN}$	Input voltage			10	V
I <sub>O</sub> I <sub>C(MAX)</sub>	Output current		-30 -100		mA
$P_d$	Power dissipation		200		mW
$T_j$	Junction temperature		150		$^{\circ}\mathbb{C}$
T <sub>stg</sub>	Storage temperature	-55		150	$^{\circ}\mathbb{C}$

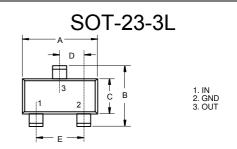
### **Electrical Characteristics @ 25°**℃

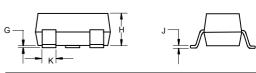
Symbol	Parameter		Тур	Max	Unit
$V_{I(off)}$	Input voltage (V <sub>CC</sub> =-5V, I <sub>O</sub> =-100 μ A)			-0.5	V
$V_{I(on)}$	$(V_O = -0.2V, I_O = -5mA)$				V
$V_{O(on)}$	Output voltage (I <sub>O</sub> /I <sub>I</sub> =-10mA/-0.5mA			-0.3	V
l <sub>l</sub>	Input current (V <sub>I</sub> =-5V)			-0.36	mA
I <sub>O(off)</sub>	Output current (V <sub>CC</sub> =-50V, V <sub>I</sub> =0)			-0.5	μА
Gı	DC current gain (V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA)	56			
R <sub>1</sub>	Input resistance	15.4	22	28.6	KΩ
R <sub>2</sub> /R <sub>1</sub>	Resistance ratio	0.8	1.0	1.2	
f <sub>T</sub>	Transition frequency (V <sub>CE</sub> =-10V, I <sub>E</sub> =5mA, f=100MHz)		250		MHz

### ●Equivalent circuit



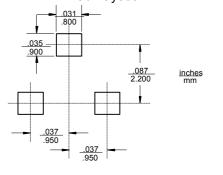
# PNP Digital Transistors





DIMENSIONS								
	INCHES		N					
DIM	MIN	MAX	MIN	MAX	NOTE			
Α	.113	.117	2.87	2.97				
В	.108	.112	2.75	2.85				
C	.061	.065	1.55	1.65				
D	.036	.038	.925	.975				
Е	.073	.077	1.85	1.95				
G	.0016	.0039	.04	.100				
Н	.044	.049	1.12	1.25				
J	.006	.007	.14	.17				
K	013	015	34	37				

### Suggested Solder Pad Layout



www.mccsemi.com

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# DTA124EKA

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#### Electrical characteristic curves

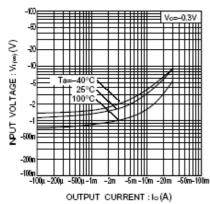


Fig.1 Input voltage vs. output current (ON characteristics)

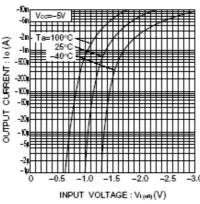


Fig.2 Output current vs. input voltage (OFF characteristics)

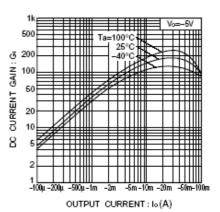


Fig.3 DC current gain vs. output current

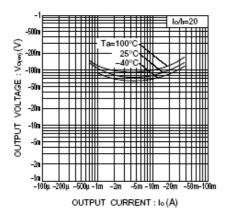


Fig.4 Output voltage vs. output current

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