

M.C.C.

Micro Commercial Components



Micro Commercial Components
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DTA143XUA

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- 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
- Halogen free available upon request by adding suffix "-HF"

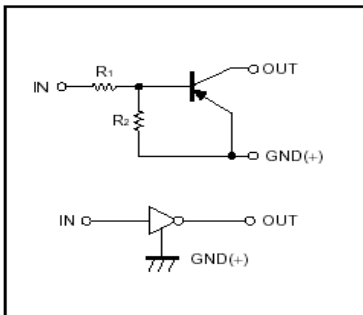
Absolute maximum ratings @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
V _{CC}	Supply voltage	---	-50	---	V
V _{IN}	Input voltage	-20	---	7	V
I _O	Output current	---	-100	---	mA
P _d	Power dissipation	---	200	---	mW
T _j	Junction temperature	---	150	---	°C
T _{stg}	Storage temperature	-55	---	150	°C

Electrical Characteristics @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
V _{I(off)}	Input voltage (V _{CC} =-5V, I _O =-100 μ A)	-0.3	---	---	V
V _{I(on)}	Input voltage (V _O =-0.3V, I _O =-20mA)	---	---	-2.5	V
V _{O(on)}	Output voltage (I _O /I _I =-10mA/-0.5mA)	---	-0.1	-0.3	V
I _I	Input current (V _I =-5V)	---	---	-1.8	mA
I _{O(off)}	Output current (V _{CC} =-50V, V _I =0)	---	---	-0.5	μ A
G ₁	DC current gain (V _O =-5V, I _O =-10mA)	30	---	---	
R ₁	Input resistance	3.29	4.7	6.11	K Ω
R ₂ /R ₁	Resistance ratio	1.7	2.1	2.6	
f _T	Transition frequency (V _O =-10V, I _O =-5mA, f=100MHz)	---	250	---	MHz

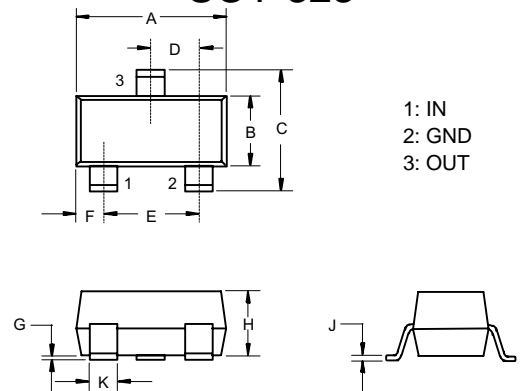
Equivalent circuit



*Marking: 33

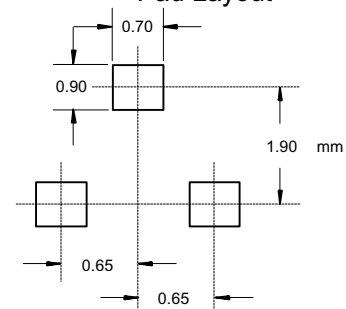
PNP Digital Transistors

SOT-323



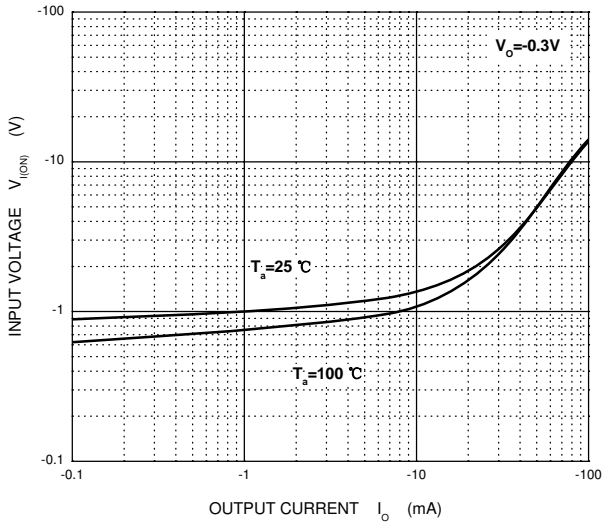
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

Suggested Solder Pad Layout

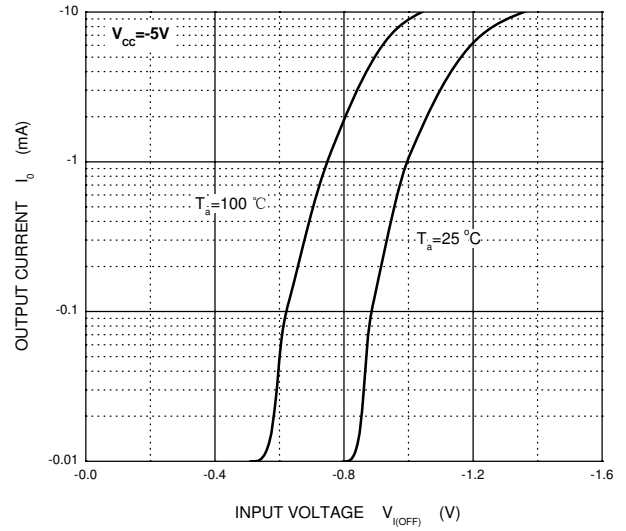


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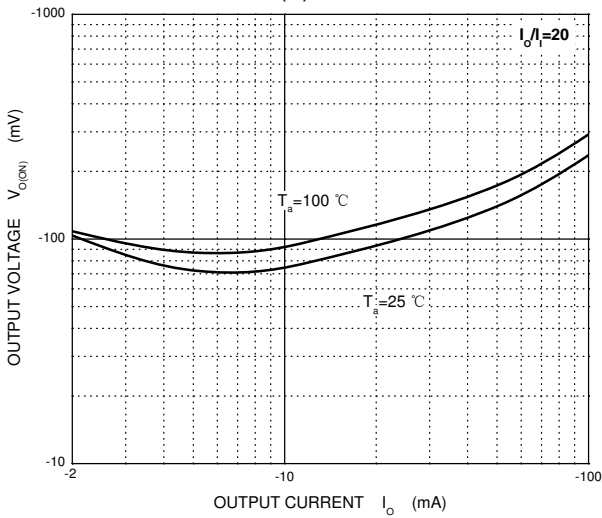
ON Characteristics



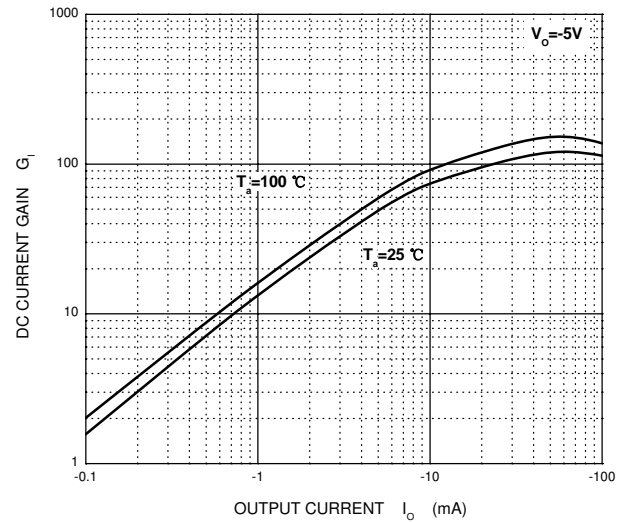
OFF Characteristics



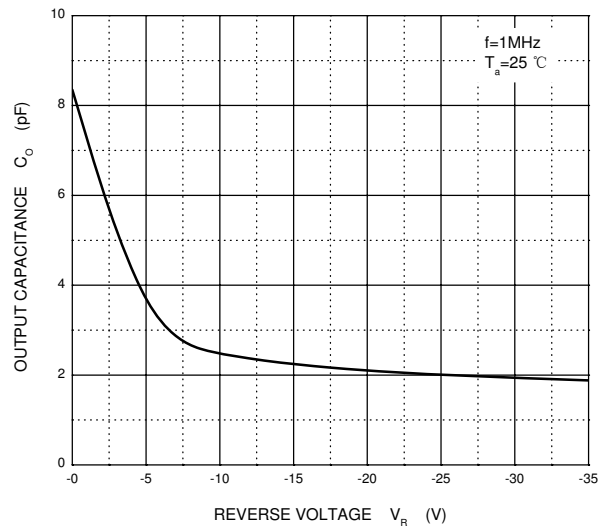
$V_{o(ON)}$ — I_o



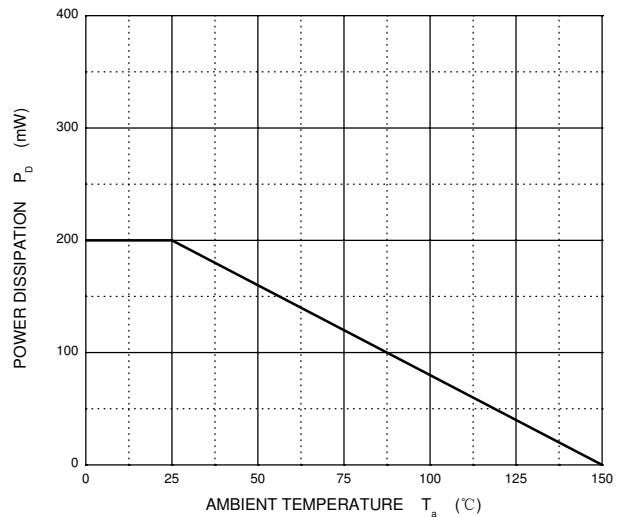
G_i — I_o



C_o — V_R



P_D — T_a





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Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 3 Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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