



Micro Commercial Components

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 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

DTC123JUA

Features

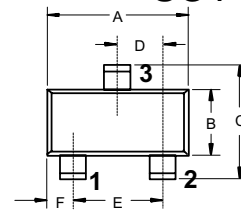
- Epitaxial Planar Die Construction
- Complementary NPN Types Available
- Built-in Bias Resistors
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Digital Transistors

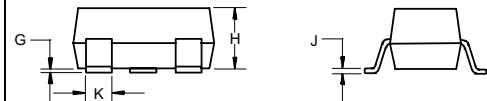
Absolute maximum ratings @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
V _{CC}	Supply voltage	---	50	---	V
V _{IN}	Input voltage	-5	---	+12	V
P _d	Power dissipation	---	200	---	mW
T _j	Junction temperature	---	150	---	°C
T _{stg}	Storage temperature	-55	---	150	°C
I _O	Output current	---	100	---	mA
I _{C(MAX)}		---	100	---	

SOT-323



1:IN
 2:GND
 3:OUT

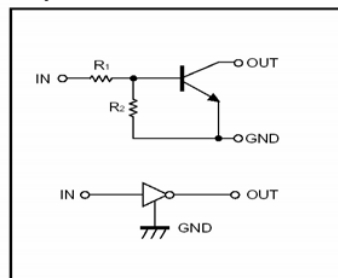


Electrical Characteristics @ 25°C

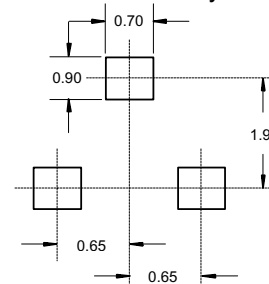
Symbol	Parameter	Min	Typ	Max	Unit
V _{I(off)}	Input voltage (V _{CC} =5V, I _O =100 μA)	---	---	0.5	V
V _{I(on)}		1.1	---	---	V
V _{O(on)}	Output voltage (I _O =5mA, I _I =0.25mA)	---	0.1	0.3	V
I _I	Input current (V _I =5V)	---	---	3.6	mA
I _{O(off)}	Output current (V _{CC} =50V, V _I =0)	---	---	0.5	μA
G ₁	DC current gain (V _O =5V, I _O =10mA)	80	---	---	---
R ₁	Input resistance	1.54	2.2	2.86	K _Ω
R ₂ /R ₁	Resistance ratio	17	21	26	---
f _T	Transition frequency (V _{CE} =10V, I _E =5mA, f=100MHz)	---	250	---	MHz

DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
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	.012	.016	.30	.40	

● Equivalent circuit



Suggested Solder Pad Layout



Typical Characteristics

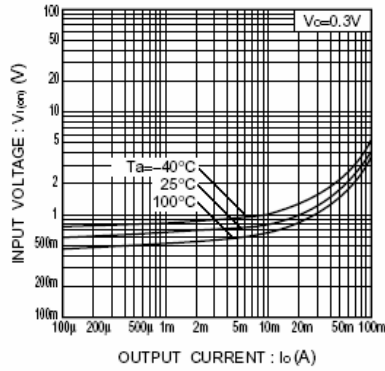


Fig.1 Input voltage vs. output current (ON characteristics)

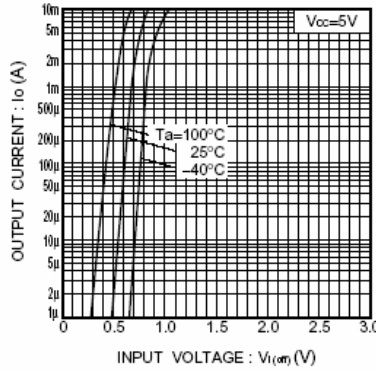


Fig.2 Output current vs. input voltage (OFF characteristics)

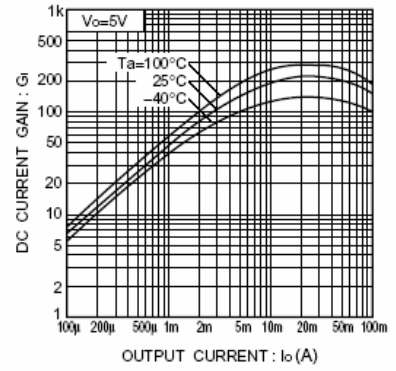


Fig.3 DC current gain vs. output current

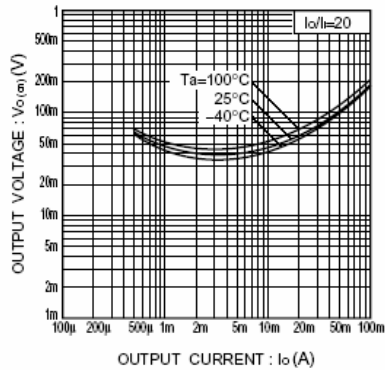


Fig.4 Output voltage vs. output current



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Ordering Information

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

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