



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

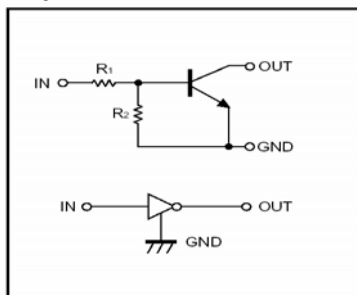
Absolute maximum ratings @ 25°C

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		

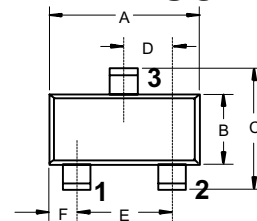
Electrical Characteristics @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
$V_{I(off)}$	Input voltage ($V_{CC}=5V$, $I_o=100 \mu A$) ($V_o=0.3V$, $I_o=5mA$)	---	---	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_i	DC current gain ($V_o=5V$, $I_o=10mA$)	80	---	---	
R_1	Input resistance	1.54	2.2	2.86	$K \Omega$
R_2/R_1	Resistance ratio	17	21	26	
f_T	Transition frequency ($V_{CE}=10V$, $I_E=5mA$, $f=100MHz$)	---	250	---	MHz

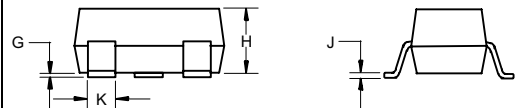
Equivalent circuit



SOT-323

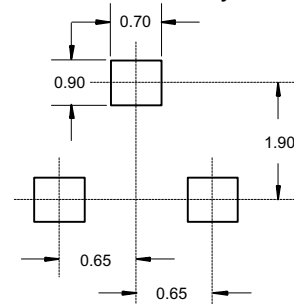


1:IN
 2:GND
 3:OUT



DIM	INCHES		MM		NOTE
	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	

Suggested Solder Pad Layout



Typical Characteristics

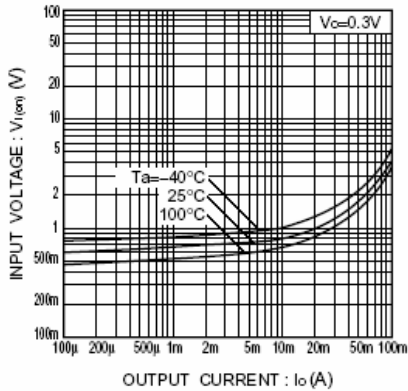


Fig.1 Input voltage vs. output current (ON characteristics)

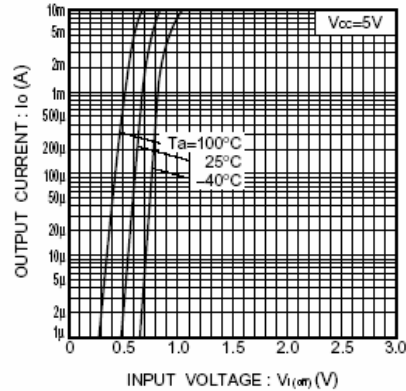


Fig.2 Output current vs. input voltage (OFF characteristics)

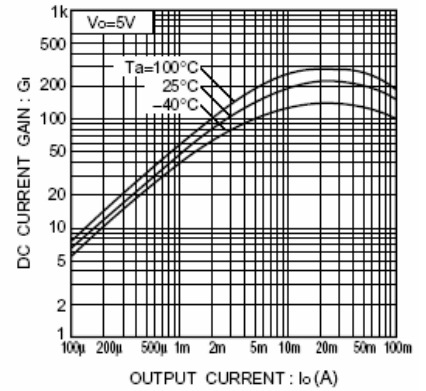


Fig.3 DC current gain vs. output current

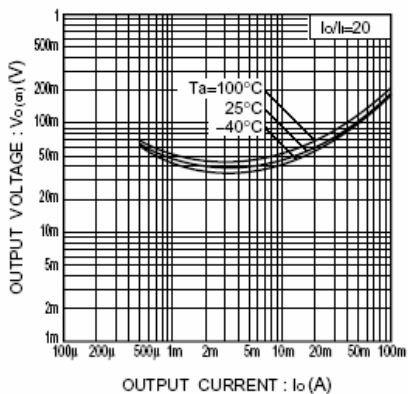


Fig.4 Output voltage vs. output current



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Ordering Information

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

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