

M.C.C.

Micro Commercial Components

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DTA123JCA

Features

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

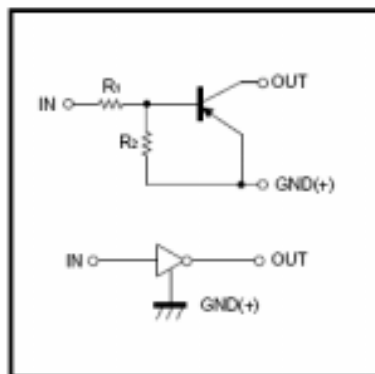
Absolute maximum ratings @ 25°C

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

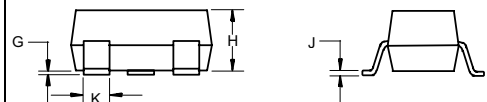
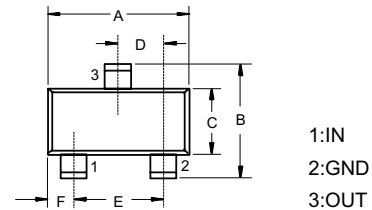
Symbol	Parameter	Min	Typ	Max	Unit
$V_{I(off)}$	Input voltage ($V_{CC}=5V$, $I_O=100 \mu A$)	---	---	0.5	V
$V_{I(on)}$		1.1	---	---	V
$V_{O(on)}$	Output voltage ($I_O=5mA$, $I_I=0.25mA$)	---	0.1	0.3	V
I_I	Input current ($V_I=5V$)	---	---	3.6	mA
$I_{O(off)}$	Output current ($V_{CC}=50V$, $V_I=0$)	---	---	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 Ω
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



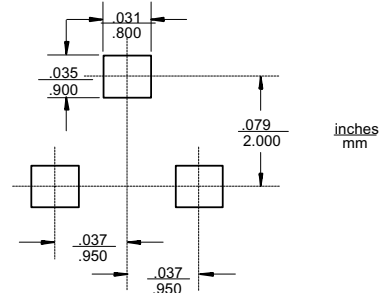
Digital Transistors

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



www.mccsemi.com

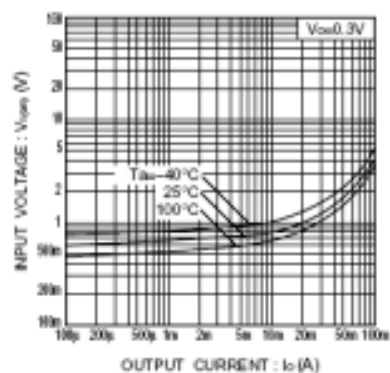


Fig.1 Input voltage vs. output current
(ON characteristics)

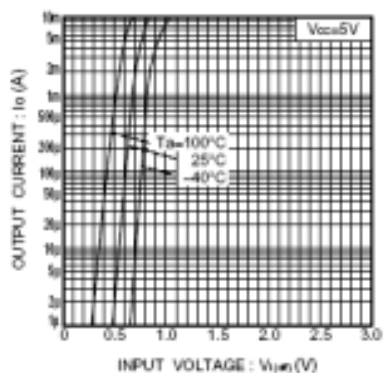


Fig.2 Output current vs. input voltage (OFF characteristics)

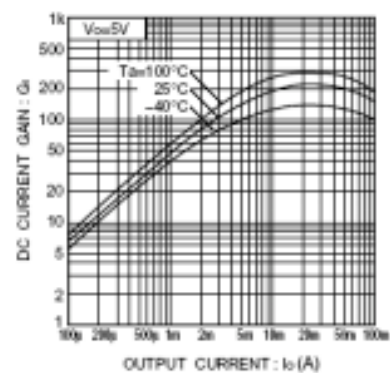


Fig.3 DC current gain vs. output current

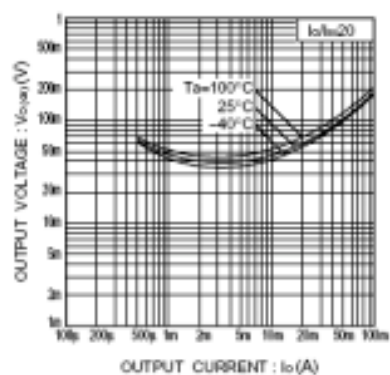


Fig.4 Output voltage vs. output current

Ordering Information

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

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