

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

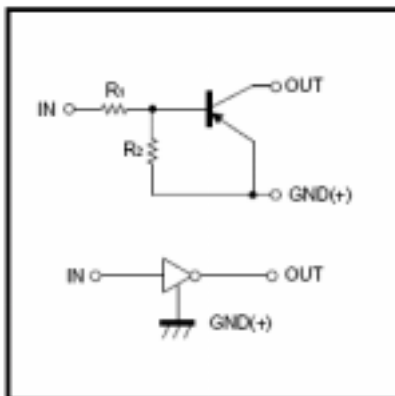
Absolute maximum ratings @ 25°C

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

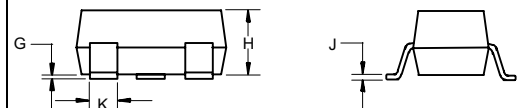
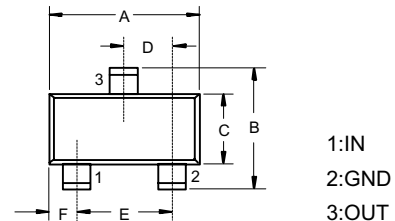
Symbol	Parameter	Min	Typ	Max	Unit
$V_{I(off)}$	Input voltage ($V_{CC}=5V$, $I_O=100 \mu A$)	---	---	0.5	V
$V_{I(on)}$	Input voltage ($V_O=0.3V$, $I_O=5mA$)	1.1	---	---	V
$V_{O(on)}$	Output voltage ($I_O=5mA$, $I_I=0.25mA$)	---	0.1	0.3	V
I_I	Input current ($V_I=5V$)	---	---	3.6	mA
$I_{O(off)}$	Output current ($V_{CC}=50V$, $V_I=0$)	---	---	0.5	mA
G_I	DC current gain ($V_O=5V$, $I_O=10mA$)	80	---	---	
R_1	Input resistance	1.54	2.2	2.86	kΩ
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



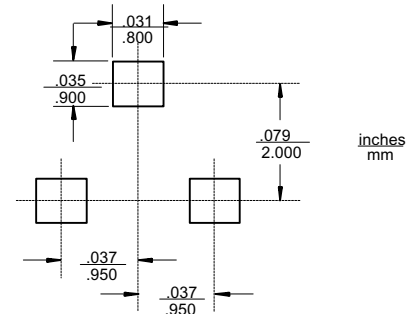
Digital Transistors

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



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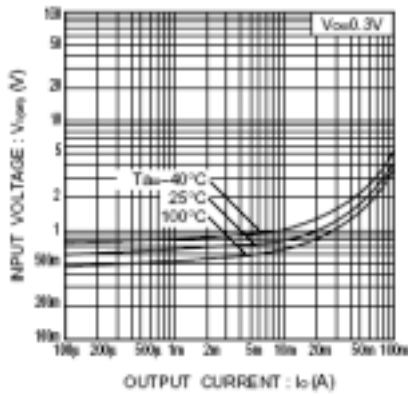


Fig.1 Input voltage vs. output current (ON characteristics)

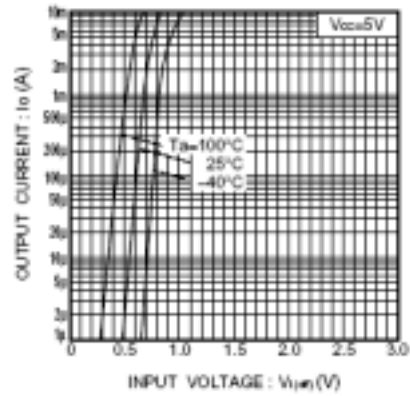


Fig.2 Output current vs. input voltage (OFF characteristics)

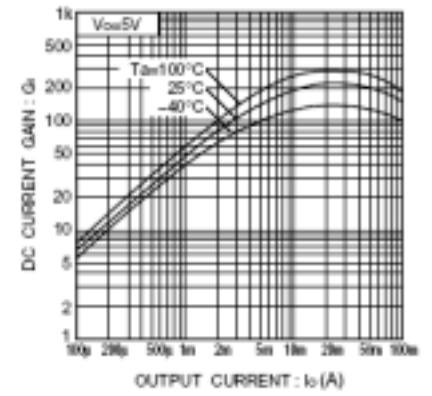


Fig.3 DC current gain vs. output current

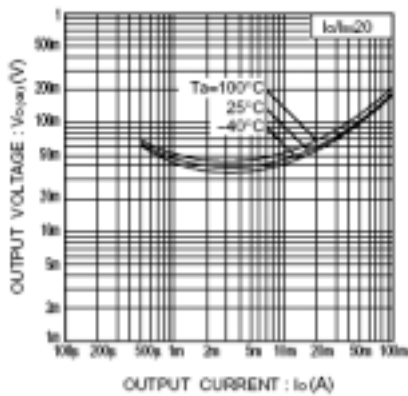


Fig.4 Output voltage vs. output current



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