

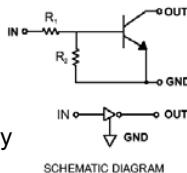
# M·C·C·

Micro Commercial Components

Micro Commercial Components  
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## Features

- Epitaxial Planar Die Construction
- Complementary NPN Types Available
- Built-In Biasing Resistors
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking: E42



## 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		

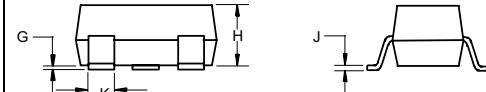
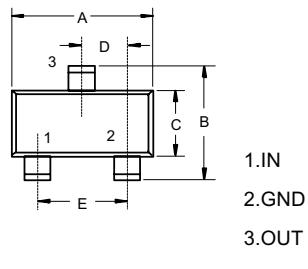
## Electrical Characteristics @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
$V_{I(off)}$	Input voltage ( $V_{CC}=5V$ , $I_o=100 \mu A$ )	---	---	0.5	V
$V_{I(on)}$	( $V_o=0.3V$ , $I_o=5mA$ )	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	$\mu A$
$G_i$	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

## DTC123JKA

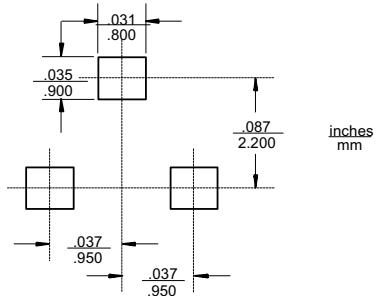
## Digital Transistors

### SOT-23-3L



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.113	.117	2.87	2.97	
B	.108	.112	2.75	2.85	
C	.061	.065	1.55	1.65	
D	.036	.038	.925	.975	
E	.073	.077	1.85	1.95	
G	.0016	.0039	.04	.100	
H	.044	.049	1.12	1.25	
J	.006	.007	.14	.17	
K	.013	.015	.34	.37	

### Suggested Solder Pad Layout



# DTC123JKA

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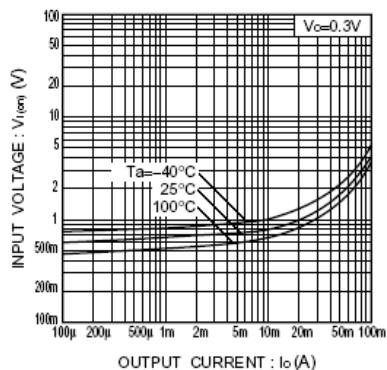


Fig.1 Input voltage vs. output current  
(ON characteristics)

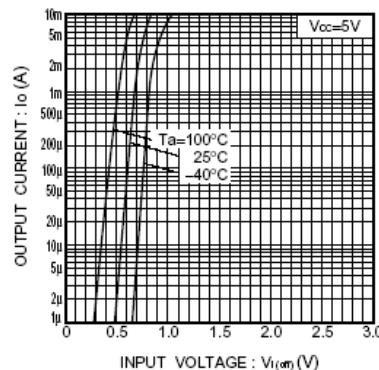


Fig.2 Output current vs. input voltage  
(OFF characteristics)

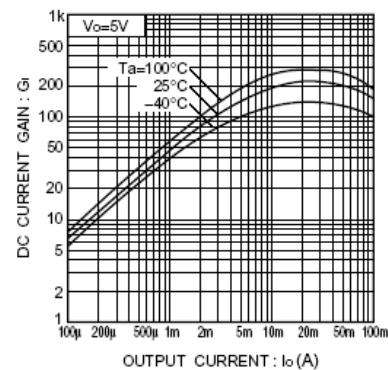


Fig.3 DC current gain vs. output current

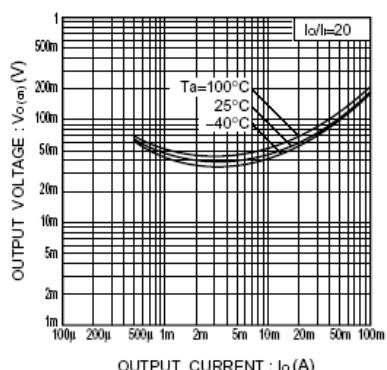


Fig.4 Output voltage vs. output current



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