



Micro Commercial Components

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DTC143ZCA

Digital Transistors

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epitaxial Planar Die Construction
- Complementary NPN Types Available
- Built-In Biasing Resistors
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: E23
- Halogen free available upon request by adding suffix "-HF"

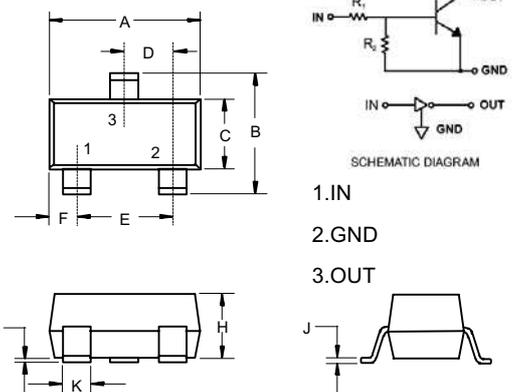
Absolute maximum ratings @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
V_{CC}	supply voltage	---	50	---	V
I_C	Collector current	---	100	---	mA
V_{IN}	Input voltage	-5	---	+30	V
P_d	Power dissipation	---	200	---	mW
T_j	Junction temperature	---	150	---	°C
T_{stg}	Storage temperature	-55	---	150	°C

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 ($V_o=0.3V, I_o=5mA$)	---	---	1.3	V
$V_{O(on)}$	Output voltage ($I_o=5mA, I_i=0.25mA$)	---	---	0.3	V
I_i	Input current ($V_i=5V$)	---	---	1.8	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	3.29	4.7	6.11	$K \Omega$
R_2/R_1	Resistance ratio	8	10	12	
f_T	Transition frequency ($V_{CE}=10V, I_E=5mA, f=100MHz$)	---	250	---	MHz

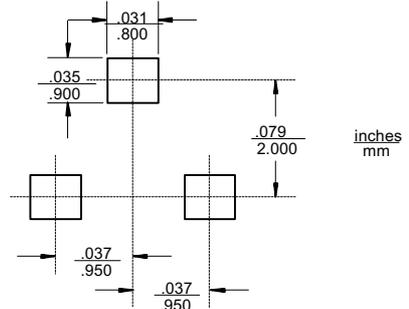
SOT-23



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	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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Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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