M·C·C·

Micro Commercial Components

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DTC143ZCA

Digital Transistors

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
- Marking: E23

Absolute maximum ratings @ 25℃

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

Electrical Characteristics @ 25℃

Symbol	Parameter	Min	Typ	Max	Unit
$V_{I(off)}$	Input voltage (V_{CC}=5V, I_O=100μA)	---	---	1.3	V
$V_{I(on)}$	(V_O=0.3V, I_O=5mA)	0.5	---	---	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_I	DC current gain (V_O=5V, I_O=10mA)	80	---	---	
R_1	Input resistance	3.29	4.7	6.11	KΩ
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

SCHEMATIC DIAGRAM

1.IN

2.GND

3.OUT

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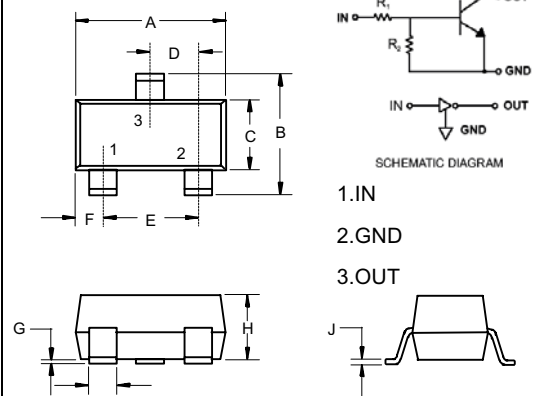
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

$\frac{.031}{.800}$

$\frac{.035}{.900}$

$\frac{.079}{2.000}$

$\frac{inches}{mm}$

$\frac{.037}{.950}$

$\frac{.037}{.950}$

www.mccsemi.com
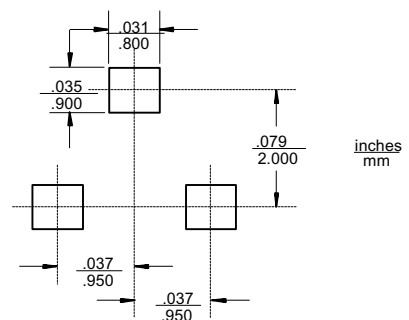
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Ordering Information

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

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