



Micro Commercial Components

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DTC143XUA

Digital Transistors

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epitaxial Planar Die Construction
- Complementary PNP Types Available
- Built-In Biasing Resistors
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 143
- Halogen free available upon request by adding suffix "-HF"

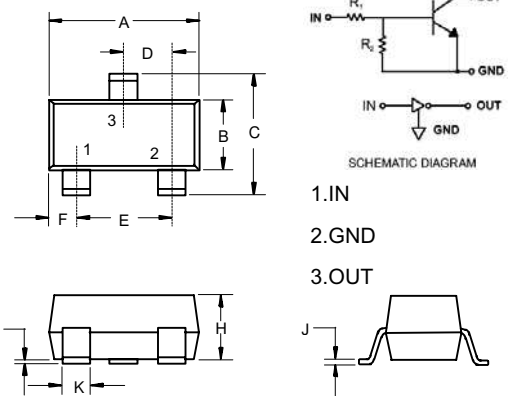
Absolute maximum ratings @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
V _{CC}	Supply voltage	---	50	---	mA
I _C	Collector current	---	100	---	mA
V _{IN}	Input voltage	-7	---	+20	V
P _d	Power dissipation	---	200	---	mW
T _J	Junction temperature	---	150	---	°C
T _{stg}	Storage temperature	-55	---	150	°C

Electrical Characteristics @ 25°C

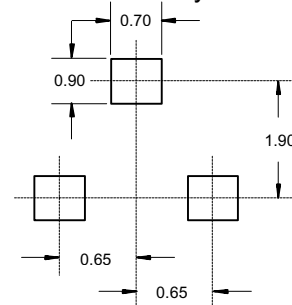
Symbol	Parameter	Min	Typ	Max	Unit
V _{I(off)}	Input voltage (V _{CC} =5V, I _O =100 μ A)	---	---	0.3	V
V _{I(on)}	(V _O =0.3V, I _O =20mA)	2.5	---	---	V
V _{O(on)}	Output voltage (I _O =10mA, I _I =0.5mA)	---	0.1	0.3	V
I _I	Input current (V _I =5V)	---	---	1.8	mA
I _{O(off)}	Output current (V _{CC} =50V, V _I =0)	---	---	0.5	μ A
G ₁	DC current gain (V _O =5V, I _O =10mA)	30	---	---	
R ₁	Input resistance	3.29	4.7	6.11	K Ω
R ₂ /R ₁	Resistance ratio	1.7	2.1	2.6	
f _T	Transition frequency (V _{CE} =10V, I _E =5mA, f=100MHz)	---	250	---	MHz

SOT-323



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

Suggested Solder Pad Layout



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Typical Characteristics

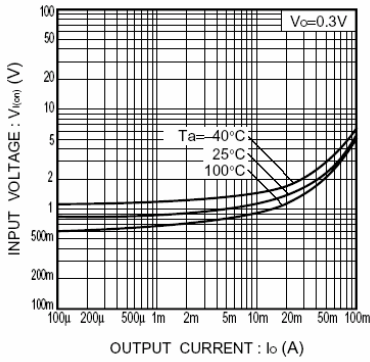


Fig.1 Input voltage vs. output current (ON characteristics)

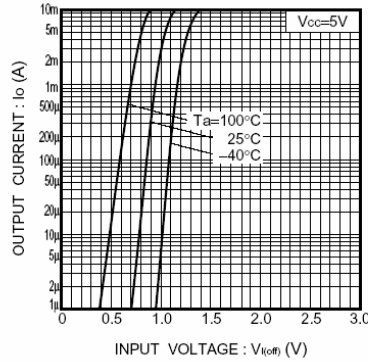


Fig.2 Output current vs. input voltage (OFF characteristics)

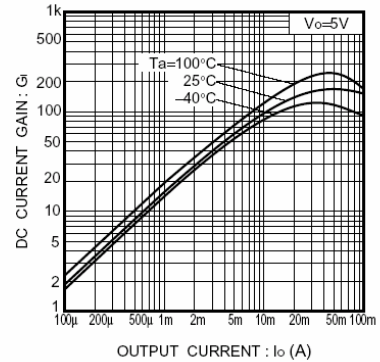


Fig.3 DC current gain vs. output current

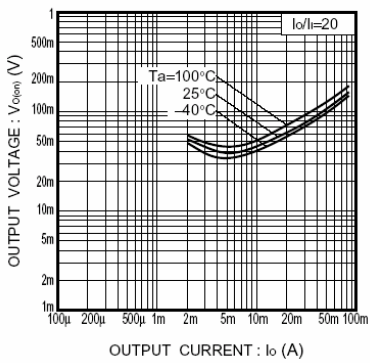


Fig.4 Output voltage vs. output current



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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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