



WILLAS



NPN Digital Transistor

DTC123JUA

Features

- Epitaxial Planar Die Construction
- Complementary NPN Types Available
- Built-in Bias Resistors
- **Pb-Free package is available**
RoHS product for packing code suffix "G"
Halogen free product for packing code suffix "H"
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

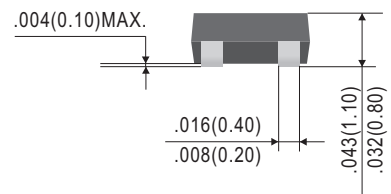
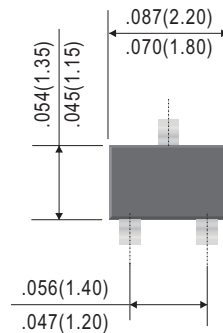
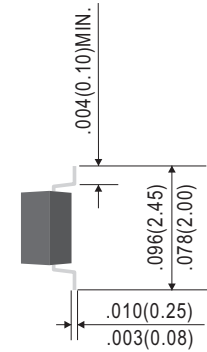
Absolute maximum ratings @ 25°C

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

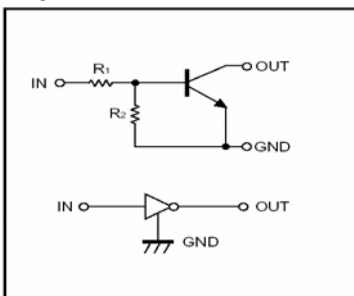
Symbol	Parameter	Min	Typ	Max	Unit
$V_{i(off)}$	Input voltage ($V_{CC}=5V, I_o=100 \mu A$) ($V_o=0.3V, I_o=5mA$)	0.5	---	---	V
$V_{i(on)}$		---	---	1.1	
$V_{o(on)}$	Output voltage ($I_o=5mA, I_i=0.25mA$)	---	0.1	0.3	V
I_i	Input current ($V_i=5V$)	---	---	3.6	mA
$I_{o(off)}$	Output current ($V_{CC}=50V, V_i=0$)	---	---	0.5	μA
G_i	DC current gain ($V_o=5V, I_o=10mA$)	80	---	---	
R_1	Input resistance	1.54	2.2	2.86	K_{Ω}
R_2/R_1	Resistance ratio	17	21	26	
f_T	Transition frequency ($V_o=10V, I_o=5mA, f=100MHz$)	---	250	---	MHz

SOT-323



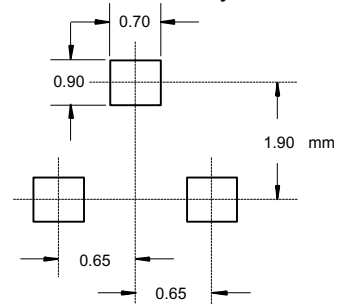
Dimensions in inches and (millimeters)

Equivalent circuit



*Marking: E42

Suggested Solder Pad Layout





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Typical Characteristics

