

SOT-883

Digital Transistor (Built-in Resistors)

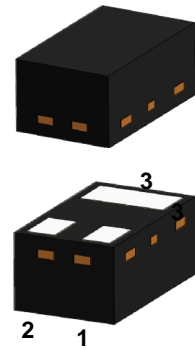
PNP Silicon Surface Mount Transistor

Green Product

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CB0}	Collector-base Voltage	-50	V
V_{CE0}	Collector-emitter Voltage	-50	V
V_{EB0}	Emitter-base Voltage	-5	V
I_C	Collector Current	-100	mA
P_D	Power Dissipation	150	mW
T_J	Junction to Ambient	150	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the device may be impaired.



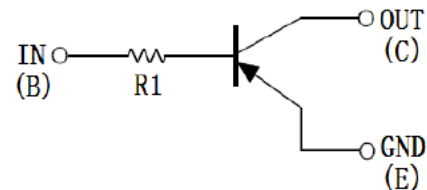
SOT-883 (DFN1006-3)

1. IN
2. GND
3. OUT

FEATURES:

- § Built-in resistors enable the configuration of a inverter circuit without connecting external input resistors.
- § The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- § Only the on/off conditions need to be set for operation, making device design easy.
- § DFN1006-3
- § RoHS Compliant
- § Green EMC
- § Matte Tin(Sn) Lead Finish
- § Weight: approx. 0.001g

ELECTRICAL SYMBOL:

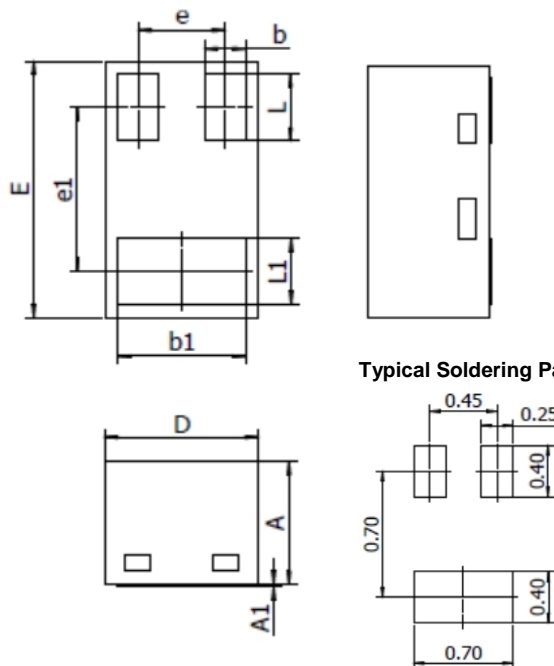


DEVICE MARKING CODE:

Device Type	Device Marking
DTA114TN3	94
DTA143TN3	93

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Limits			Unit
			Min	Typ	Max	
Collector-base breakdown Voltage	BV_{CBO}	$I_C = -50\mu\text{A}, I_E = 0$	-50			V
Collector-emitter breakdown Voltage	BV_{CEO}	$I_C = -1\text{mA}, I_B = 0$	-50			V
Emitter-base breakdown Voltage	BV_{EBO}	$I_E = -50\mu\text{A}, I_C = 0$	-5			V
Collector cut-off Current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$			-0.5	μA
Emitter cut-off Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$ DTA114TN3 DTA143TN3	$I_C = -10\text{mA}, I_B = -1\text{mA}$ $I_C = -5\text{mA}, I_B = -0.25\text{mA}$			-0.3 -0.3	V
DC current gain	h_{FE}	$V_{CE} = -5\text{V}, I_C = -1\text{mA}$	100	250	600	
Input Resistance	R_1 DTA114TN3 DTA143TN3		7 3.29	10 4.7	13 6.11	K Ω
Transition Frequency	f_T	$V_{CE} = -10\text{V}, I_E = -5\text{mA}$ $f = 100\text{MHz}$		250		MHz

SOT-883 Package Outline


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.46	0.50	0.018	0.020
A1	---	0.03	---	0.001
D	0.55	0.65	0.022	0.026
E	0.95	1.05	0.037	0.041
b	0.12	0.22	0.005	0.008
b1	0.45	0.55	0.018	0.022
L	0.22	0.32	0.008	0.013
L1	0.22	0.32	0.008	0.013
e	Typ. 0.34		Typ. 0.013	
e1	Typ. 0.65		Typ. 0.026	

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