DTA143TE

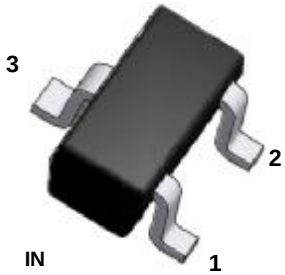
SOT-523
Digital Transistor (Built-in Resistors)
PNP Silicon Surface Mount Transistor

Green Product

Absolute Maximum Ratings (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-base Voltage	-50	V
V_{CEO}	Collector-emitter Voltage	-50	V
V_{EBO}	Emitter-base Voltage	-5	V
I_C	Collector Current	-100	mA
P_D	Power Dissipation	150	mW
T_J	Junction to Ambient	150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

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



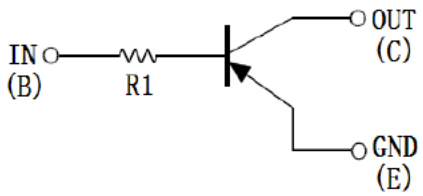
1. IN
2. GND
3. OUT

SOT-523 (SC-75A)

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.
- § RoHS Compliant
- § Green EMC
- § Matte Tin(Sn) Lead Finish
- § Weight: approx. 0.002g

ELECTRICAL SYMBOL:



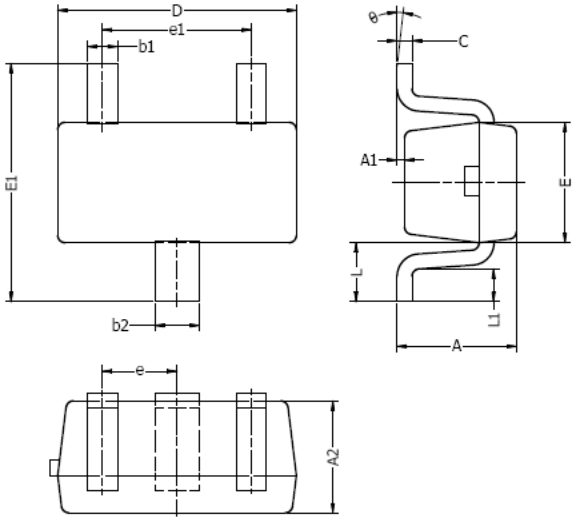
DEVICE MARKING CODE:

Device Type	Device Marking
DTA143TE	93

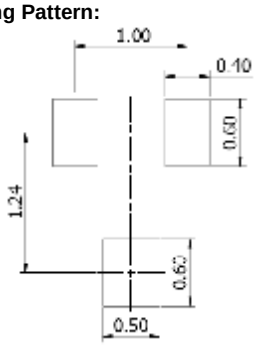
Electrical Characteristics (T_A = 25°C unless otherwise noted)

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

SOT-523 Package Outline



Typical Soldering Pattern:



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.70	0.90	0.028	0.035
A1	0.00	0.10	0.000	0.004
A2	0.70	0.80	0.028	0.031
b1	0.15	0.25	0.006	0.010
b2	0.25	0.35	0.010	0.014
c	0.10	0.20	0.004	0.008
D	1.50	1.70	0.059	0.067
E	0.70	0.90	0.028	0.035
E1	1.45	1.75	0.057	0.069
e	0.50 TYP.		0.020 TYP.	
e1	0.90	1.10	0.035	0.043
L	0.40 REF.		0.016 REF.	
L1	0.10	0.30	0.004	0.012
θ	0°	8°	0°	8°

NOTES:
1. Above package outline conforms to JEITA EAIJ ED-7500A SC-75A.
2. Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

NOTICE

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