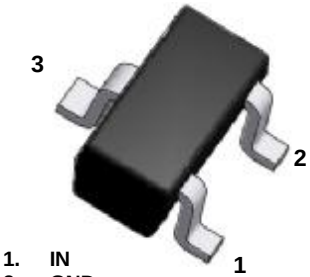
DTA144EE

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

Green Product



1. IN
2. GND
3. OUT

SOT-523 (SC-75A)

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

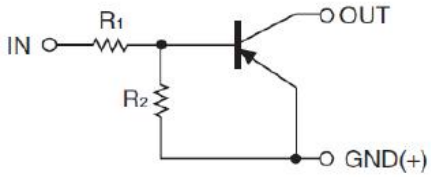
Symbol	Parameter	Value	Units
V_{CC}	Supply Voltage	-50	V
V_{IN}	Input Voltage	-40 ~ +10	V
I_O	Output Current	-30	mA
I_{CM}	Peak Collector Current	-100	mA
P_D	Power Dissipation	150	mW
T_J	Junction to Ambient	150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

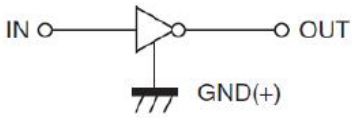
These ratings are limiting values above which the serviceability of the device may be impaired.

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:





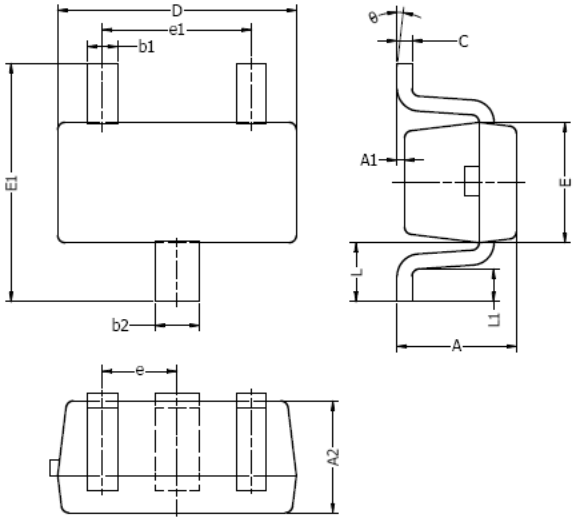
DEVICE MARKING CODE:

Device Type	Device Marking
DTA144EE	16

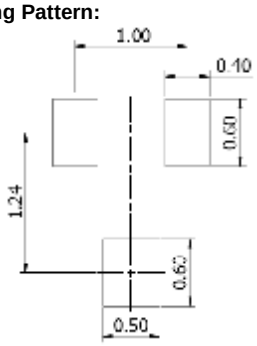
Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Limits			Unit
			Min	Typ	Max	
Input Voltage	$V_{I(off)}$	V_{CC}= -5V, I_O= -100uA	-0.5			V
	$V_{I(on)}$	V_O= -0.3V, I_O=-2mA			-3	V
Output Voltage	$V_{O(on)}$	I_O / I_I = -10mA/-0.5mA			-0.3	V
Input Current	I_I	V_I = -5V			-0.18	mA
Output Current	$I_{O(off)}$	V_{CC} = -50V, V_I = 0			-0.5	uA
DC Current Gain	G_I	V_O = -5V, I_O = -5mA	68			
Input Resistance	R_1		32.9	47	61.1	KΩ
Resistance Ratio	R_2 /R_1		0.8	1	1.2	
Transition Frequency	f_T	V_O = -10V, I_O = -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.

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