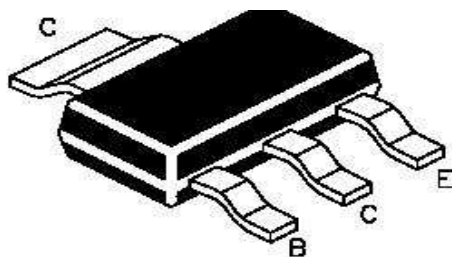


## NPN SILICON PLANAR EPITAXIAL TRANSISTOR

PZTA44



SOT-223  
Formed SMD Package

High Voltage Transistor

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Base Voltage	$V_{CBO}$	500	V
Collector Emitter Voltage	$V_{CEO}$	400	V
Emitter Base Voltage	$V_{EBO}$	6.0	V
Collector Current (DC)	$I_C$	300	mA
Collector Current Peak	$I_{CM}$	300	mA
Base Current Peak	$I_{BM}$	100	mA
Power Dissipation upto $T_{amb}=25^{\circ}C$	$*P_D$	1.35	W
Storage Temperature	$T_{stg}$	- 65 to +150	$^{\circ}C$
Junction Temperature	$T_j$	150	$^{\circ}C$
Operating Ambient Temperature	$T_{amb}$	- 65 to +150	$^{\circ}C$

### THERMAL RESISTANCE

From junction to ambient	$*R_{th(j-a)}$	91	K/W
From junction to soldering point	$R_{th(j-s)}$	10	K/W

\* Device Mounted on a printed circuit board, single sided copper, tinplated, mounting pad for collector 1 cm<sup>2</sup>.

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb}=25^{\circ}C$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Cut Off Current	$I_{CBO}$	$V_{CB}=400V, I_E=0$ $V_{CB}=400V, I_E=0, T_j=150^{\circ}C$			100 10	nA $\mu A$
Emitter Cut Off Current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			100	nA
DC Current Gain	$h_{FE}$	$I_C=1mA, V_{CE}=10V$ $I_C=10mA, V_{CE}=10V$ $*I_C=50mA, V_{CE}=10V$ $*I_C=100mA, V_{CE}=10V$	40 50 45 40		200	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1mA, I_B=0.1mA$ $I_C=10mA, I_B=1mA$ $*I_C=50mA, I_B=5mA$			0.40 0.50 0.75	V V V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$*I_C=10mA, I_B=1mA$			0.85	V
Collector Capacitance	$C_C$	$V_{CB}=20V, f=1MHz$			7.0	pF
Emitter Capacitance	$C_e$	$V_{EB}=0.5V, f=1MHz$			180	pF
Transition Frequency	$f_T$	$I_C=10mA, V_{CE}=10V, f=100MHz$	20			MHz

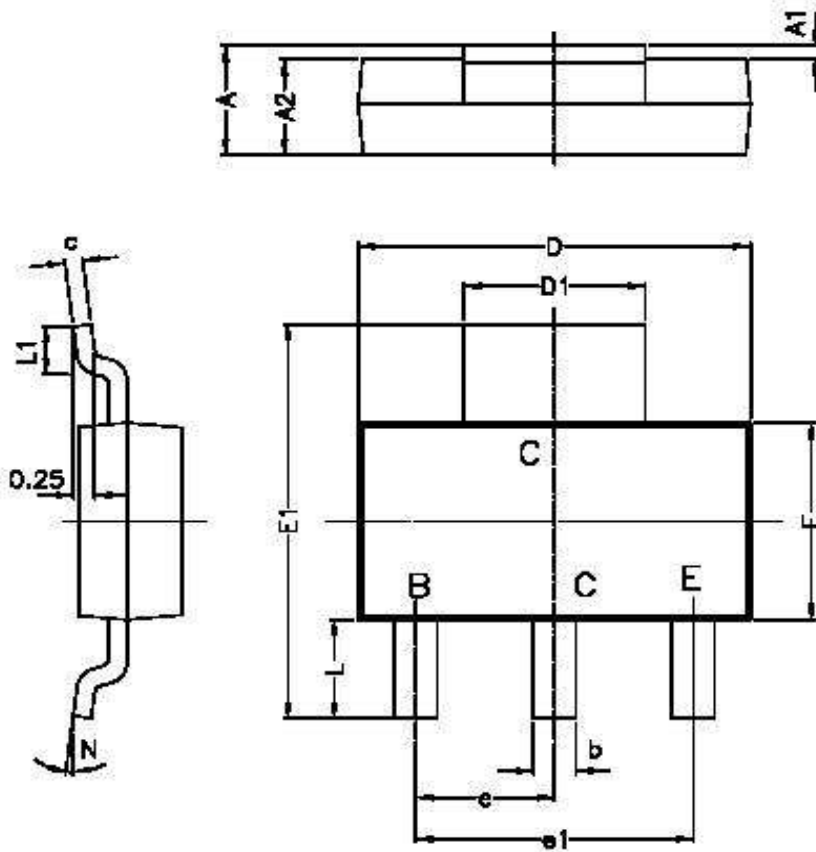
Pulse test  $tp \leq 300 \mu s$ ;  $\delta \leq 0.02$

PZTA44Rev140606E

# PZTA44

## SOT-223

### Formed SMD Package



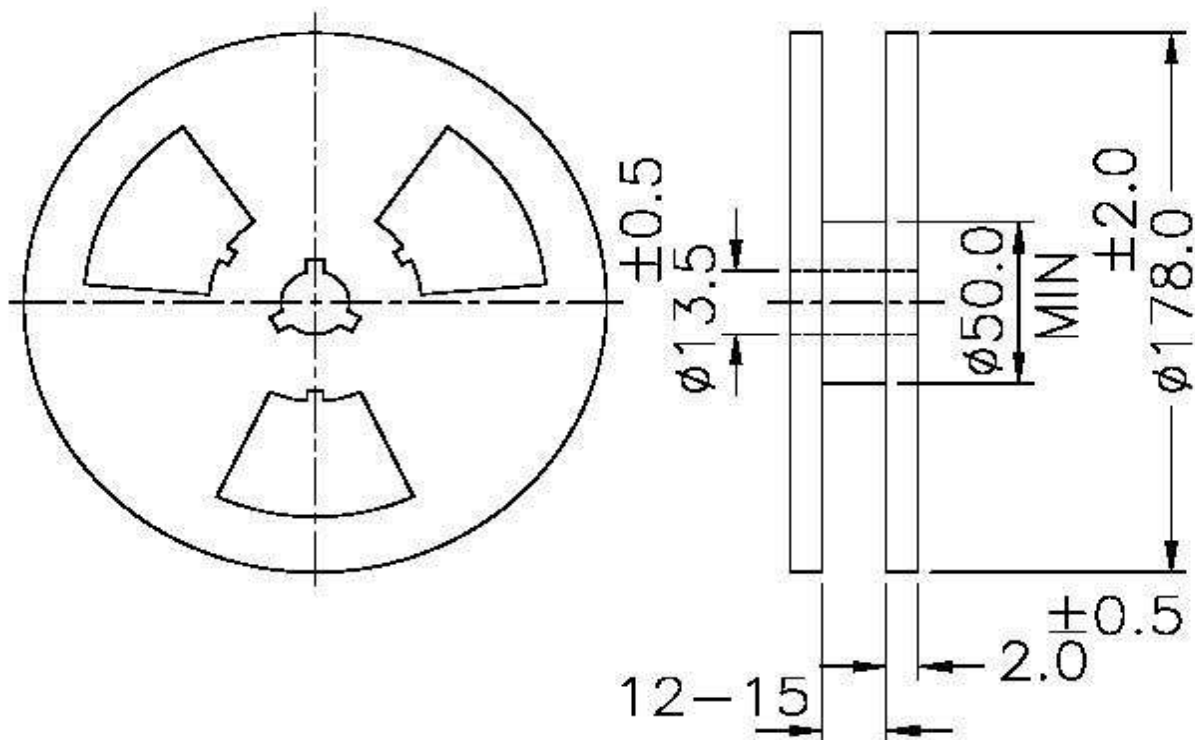
DIM	MIN.	MAX.
A	1.520	1.800
A1	0.020	0.100
A2	1.500	1.700
b	0.610	0.810
c	0.250	0.350
D	6.300	6.700
D1	2.900	3.100
E	3.300	3.700
E1	6.700	7.300
e	2.300 TYP	
e1	4.500	4.700
L	1.760 TYP	
L1	0.900	—
N	0°	10°

ALL DIMENSIONS ARE IN mm

PZTA44

SOT-223

Formed SMD Package



ALL DIMENSIONS ARE IN mm  
REEL  $\phi$  178 mm (7")  
1000 Pcs / REEL

PZTA44Rev140606E

**Component Disposal Instructions**

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

**Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119  
email@cdil.com www.cdilsemi.com