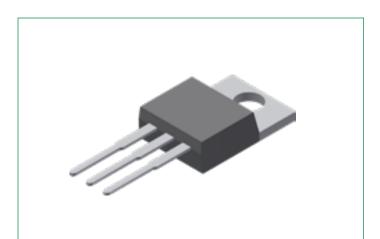
# **DSA10C150PB**

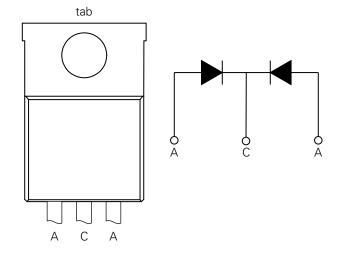
## 150 V, 10 A Schottky Rectifier Diode







### Pinout Diagram (TO-220-3L AB)



C: Cathode; A: Anode, tab: Cathode

#### **Features:**

- Very low Vf
- Extremely low switching losses
- Low Irm values
- Improved thermal behavior
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Terminals finish: 100% Pure Tin
- This is a Pb Free Device
- Epoxy meets UL 94V-0

#### **Applications:**

- Rectifiers in Switch Mode Power Supplies (SMPS)
- Free wheeling diode in low voltage converters

DSA10C150PB Diode **Datasheet** 

#### **Maximum Ratings** ( $T_A = 25$ °C unless otherwise specified)

Symbol	Characteristics	Condition	Max.	Units	
$V_{RRM}$	Peak Repetitive Reverse Voltage			_	
V <sub>RWM</sub>	Working Peak Reverse Voltage	_	150	V	
$V_{R}$	DC Blocking Voltage				
	Average Restified Forward Current	50% duty avala @T =160°C reatangular wave form	5 (Per Leg)	Α	
F (AV)	Average Rectified Forward Current 50% duty cycle @T <sub>c</sub> =160°C, rectangular wave for	50 % duty cycle & I c = 100°C, rectangular wave form	10 (Per Device)		
FSM	Peak One Cycle Non-Repetitive Surge Current (Per Leg)	10 ms, Half Sine pulse, T <sub>J</sub> =25°C	150	А	
P <sub>tot</sub>	Total power dissipation	T <sub>C</sub> = 25°C	30	W	

### **Electrical Characteristics** ( $T_A = 25^{\circ}C$ unless otherwise specified)

Symbol	Characteristics	Conditions	Тур.	Max.	Units
$V_{\rm F1}$	Forward Voltage Drop (Per Leg) <sup>1</sup>	@ 5A, Pulse, T <sub>J</sub> = 25°C	_	0.86	V
$V_{F2}$	Forward voitage Drop (Fer Leg)	@ 5A, Pulse, T <sub>J</sub> = 125°C	_	0.71	V
I <sub>R1</sub>	Reverse Current (Per Leg) <sup>1</sup>	$@V_R = rated V_R, T_J = 25^{\circ}C$	_	100	uA
I <sub>R2</sub>	neverse current (Fer Leg)	$@V_R = rated V_R, T_J = 125^{\circ}C$	_	5	mA
C <sub>T</sub>	Junction Capacitance (Per Leg)	$@V_R = 24 \text{ V, T}_C = 25 \text{ °C}$ $f_{SIG} = 1 \text{MHz}$	50	-	pF

Note 1: Pulse width < 300  $\mu$ s, duty cycle < 2%

#### **Thermal-Mechanical Specifications**

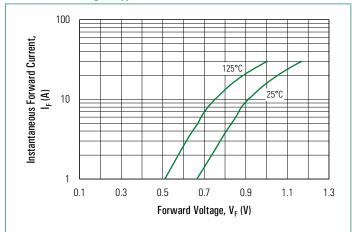
Symbol	Characteristics	Condition	Specification	Units
$T_{J}$	Junction Temperature	_	-55 to +175	°C
T <sub>o</sub>	Operation temperature	_	-55 to +150	°C
$T_{stg}$	Storage Temperature	_	-55 to +150	°C
$M_{\scriptscriptstyle D}$	Mounting torque	-	Min 0.4 Max 0.6	Nm
F <sub>c</sub>	Mounting force with clip	_	Min 20 Max 60	N
R <sub>eJC</sub>	Maximum Thermal Resistance Junction to Case	DC operation	4.8	°C/W
$R_{\Theta JS}$	Typical Thermal Resistance Junction to Heat Sink	-	0.5	°C/W
wt	Approximate Weight	_	2	g



DSA10C150PB Diode **Datasheet** 

#### **Characteristic Curves**

Fig. 1. Typical Forward Characteristics



90

Reverse Voltage,  $V_R$  (V)

120

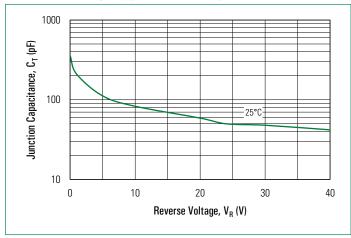
150

60

30

Fig. 2. Typical Reverse Characteristics

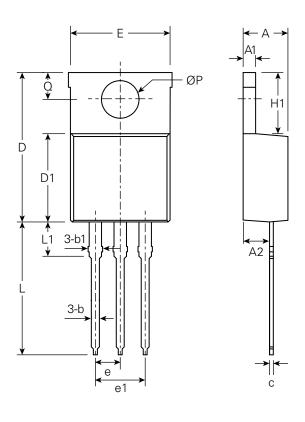
Fig. 3. Typical Junction Capacitance





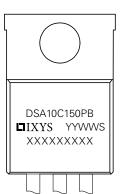
DSA10C150PB Diode **Datasheet** 

#### Part Outline Drawing (TO-220-3L AB)



C	Inches			Millimeters		
Symbol	Min.	Typical	Max.	Min.	Typical	Max.
А	0.140	_	0.190	3.56	-	4.83
A1	0.020	-	0.055	0.51	-	1.40
A2	0.080	_	0.115	2.03	_	2.92
b	0.015	_	0.040	0.38	_	1.02
b1	0.045	-	0.070	1.14	-	1.78
С	0.012	_	0.024	0.31	_	0.61
D	0.560	_	0.650	14.22	_	16.51
D1	0.330	_	0.371	8.38	_	9.42
Е	0.380	_	0.420	9.65	_	10.67
е	_	0.100	_	_	2.54	_
e1	_	0.200	_	_	5.08	_
H1	0.230	_	0.270	5.84	_	6.86
L	0.500	-	0.580	12.70	-	14.73
L1	_	-	0.250	_	_	6.35
ØP	_	0.140	_	_	3.56	_
Q	0.100	-	0.135	2.54	_	3.43

#### **Part Number and Marking**



D = Diode

S = Schottky Diode

A Low VF

10 = Current Rate (10A)

C Common Cathode

150 = Voltage Rating (150V)

PB = Package Code (TO-220AB)

YY = Year

WW = Work Week

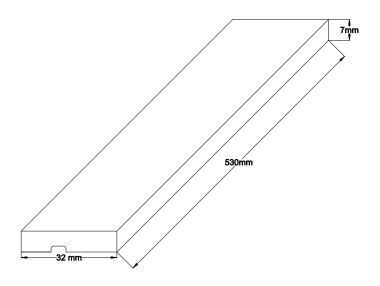
S = Plant Location Code

XXXXXXXXX = Lot Number

#### **Ordering Information**

Part Number Marking		Packing Mode	Quantity
DSA10C150PB	DSA10C150PB	Tube	50 pcs/tube

#### **Packing Specifications**



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