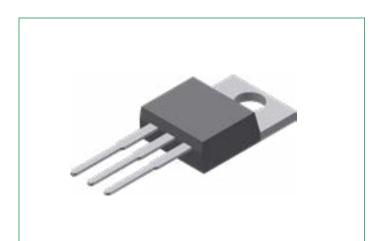
# DSA20C60PB

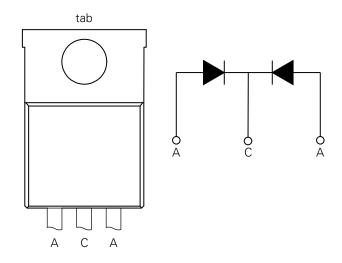
# 60 V, 20 A Schottky Rectifier Diode







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



C: Cathode; A: Anode, tab: Cathode

#### **Features:**

- Very low V<sub>F</sub>
- Extremely low switching losses
- Low I<sub>RM</sub> 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

#### **Product Summary**

Characteristic	Value	Unit
$V_{_{\mathrm{RRM}}}$	60	V
I <sub>FAV</sub>	2 x 10	А
V <sub>E</sub>	0.70	V

DSA20C60PB 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	_	60	V	
V <sub>R</sub>	DC Blocking Voltage				
	Average Poetified Ferward Current	50% duty cycle @T <sub>c</sub> = 155°C,	10 (Per Leg)	۸	
FAV	Average Rectified Forward Current	rectangular wave form	20 (Per Device)	A	
I <sub>FSM</sub>	Peak One Cycle Non-Repetitive Surge Current (Per Leg)	10 ms, Half Sine pulse, T <sub>VJ</sub> = 25°C	240	А	
$P_{tot}$	Total power dissipation	T <sub>c</sub> = 25°C	52	W	

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

Symbol	Characteristics	Conditions	Тур.	Max.	Units
$V_{F1}$	Forward Voltage Drop (Per Leg) <sup>1</sup>	@ 10 A, Pulse, T <sub>VJ</sub> = 25°C	-	0.86	V
$V_{F2}$	rorward voltage Drop (Fer Leg).	@ 10 A, Pulse, T <sub>VJ</sub> = 125°C	_	0.70	V
I <sub>R1</sub>	Poweres Current (Per Legi)	$@V_R = rated V_R, T_{VJ} = 25^{\circ}C$	_	200	uA
I <sub>R2</sub>	Reverse Current (Per Leg) <sup>1</sup>	$@V_R = rated V_R, T_{VJ} = 125^{\circ}C$	ı	15	mA
C <sub>T</sub>	Junction Capacitance (Per Leg)	$@V_R = 12 \text{ V, T}_C = 25^{\circ}\text{C}$ $f_{SIG} = 1 \text{ MHz}$	194	_	pF

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

### **Thermal-Mechanical Specifications**

Symbol	Characteristics	Condition	Specification	Units
T <sub>VJ</sub>	Junction Temperature	_	-55 to +150	°C
T <sub>o</sub>	Operation temperature	-	-55 to +150	°C
T <sub>stg</sub>	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>thJC</sub>	Maximum Thermal Resistance Junction to Case	DC operation	2.4	K/W
R <sub>thJS</sub>	Typical Thermal Resistance Junction to Heat Sink	-	0.5	K/W
wt	Approximate Weight	-	2	g



DSA20C60PB Diode **Datasheet** 

#### **Characteristic Curves**

Fig. 1. Typical Forward Characteristics

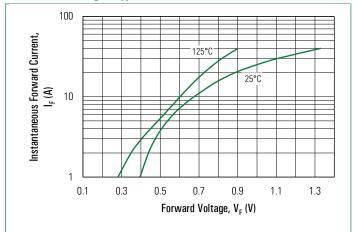


Fig. 2. Typical Reverse Characteristics

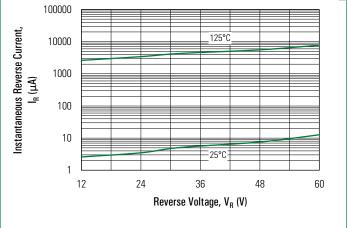
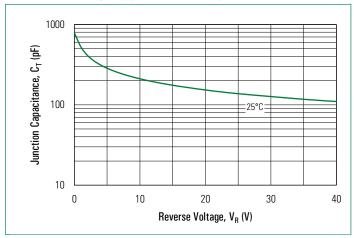


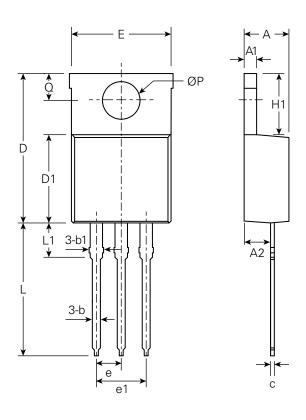
Fig. 3. Typical Junction Capacitance





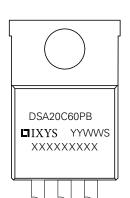
DSA20C60PB Diode **Datasheet** 

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



Completel	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

20 = Current Rate (20 A)

C Common Cathode

60 = Voltage Rating (60 V)

PB = Package Code (TO-220AB)

YY = Year

WW = Work Week

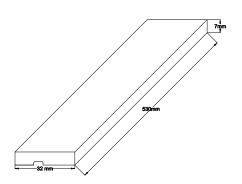
S = Plant Location Code

XXXXXXXXX = Lot Number

### **Ordering Information**

Part Number	rt Number Marking Packing		Quantity
DSA20C60PB	DSA20C60PB	Tube	50 pcs/tube

## **Packing Specifications**



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Part of:



