

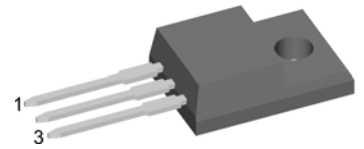
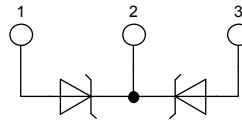
# Schottky Diode

High Performance Schottky Diode  
 Low Loss and Soft Recovery  
 Common Cathode

$V_{RRM} = 100\text{ V}$   
 $I_{FAV} = 2 \times 10\text{ A}$   
 $V_F = 0.72\text{ V}$

Part number

**DSA 20 C 100 PN**



Backside: isolated

E72873

**Features / Advantages:**

- Very low  $V_f$
- Extremely low switching losses
- low  $I_{rm}$  values
- Improved thermal behaviour
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching

**Applications:**

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters

**Package:**

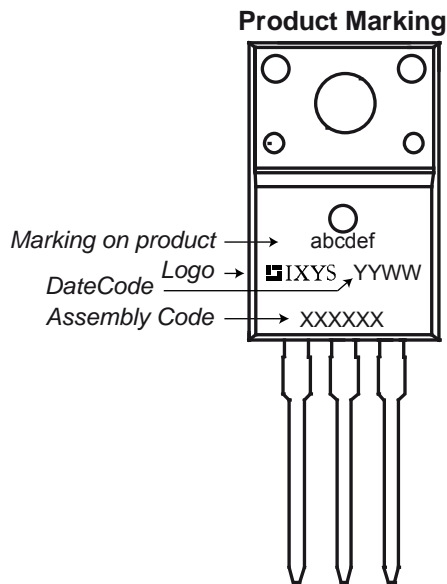
- Housing: TO-220FP
- Industry standard outline
- Plastic overmolded tab for electrical isolation
- Epoxy meets UL 94V-0
- RoHS compliant

**Ratings**

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
$V_{RRM}$	max. repetitive reverse voltage				100	V
$I_R$	reverse current	$V_R = 100\text{ V}$			0.2	$\mu\text{A}$
		$V_R = 100\text{ V}$			2	mA
$V_F$	forward voltage	$I_F = 10\text{ A}$			0.90	V
		$I_F = 20\text{ A}$			1.50	V
		$I_F = 10\text{ A}$			0.72	V
		$I_F = 20\text{ A}$			0.88	V
$I_{FAV}$	average forward current	rectangular, $d = 0.5$			10	A
$V_{FD}$	threshold voltage	} for power loss calculation only			0.46	V
$r_F$	slope resistance				17	$\text{m}\Omega$
$R_{thJC}$	thermal resistance junction to case				4.50	K/W
$T_{VJ}$	virtual junction temperature		-55		175	$^{\circ}\text{C}$
$P_{tot}$	total power dissipation				35	W
$I_{FSM}$	max. forward surge current	$t = 10\text{ ms}$ (50 Hz), sine			220	A
$C_J$	junction capacitance	$V_R = \text{tbd V}$ ; $f = 1\text{ MHz}$		tbd		pF

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
$I_{RMS}$	RMS current	per pin <sup>1)</sup>			35	A
$R_{thCH}$	thermal resistance case to heatsink			0.50		K/W
$T_{stg}$	storage temperature		-55		150	°C
<b>Weight</b>				2		g
$M_D$	mounting torque		0.4		0.8	Nm
$F_C$	mounting force with clip		20		60	N

<sup>1)</sup>  $I_{RMS}$  is typically limited by: 1. pin-to-chip resistance; or by 2. current capability of the chip.  
 In case of 1, a common cathode/anode configuration and a non-isolated backside, the whole current capability can be used by connecting the backside.

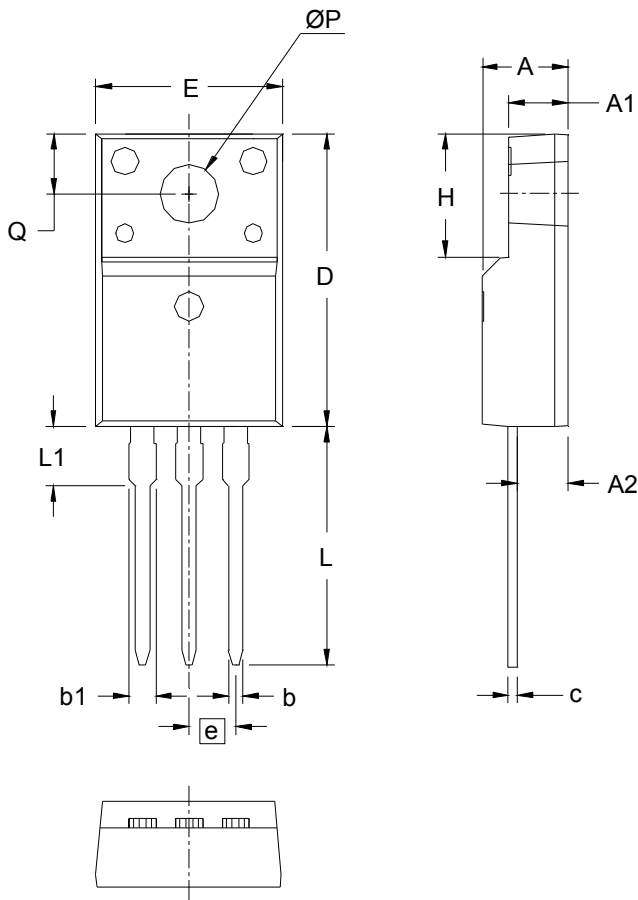

**Part number**

- D = Diode
- S = Schottky Diode
- A = low VF
- 20 = Current Rating [A]
- C = Common Cathode
- 100 = Reverse Voltage [V]
- PN = TO-220ACFP (3)

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSA 20 C 100 PN	DSA20C100PN	Tube	50	503516

Similar Part	Package	Voltage class
DSA20C100PB	TO-220	100
DSA20C60PN	TO-220FP	60
DSSK20-0045AM	TO-220	45
DSSK20-015A	TO-220	150

### Outlines



SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.177	.193	4.50	4.90
A1	.092	.108	2.34	2.74
A2	.101	.117	2.56	2.96
b	.028	.035	0.70	0.90
b1	.050	.058	1.27	1.47
c	.018	.024	0.45	0.60
D	.617	.633	15.67	16.07
E	.392	.408	9.96	10.36
e	.100 BSC		2.54 BSC	
H	.255	.271	6.48	6.88
L	.499	.523	12.68	13.28
L1	.119	.135	3.03	3.43
$\text{ØP}$	.121	.129	3.08	3.28
Q	.126	.134	3.20	3.40