

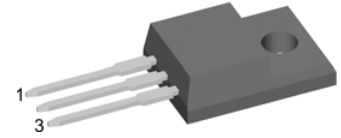
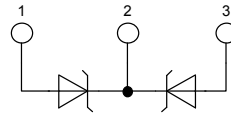
Schottky Diode

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

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

Part number

DSA 20 C 100 PN



Backside: isolated

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

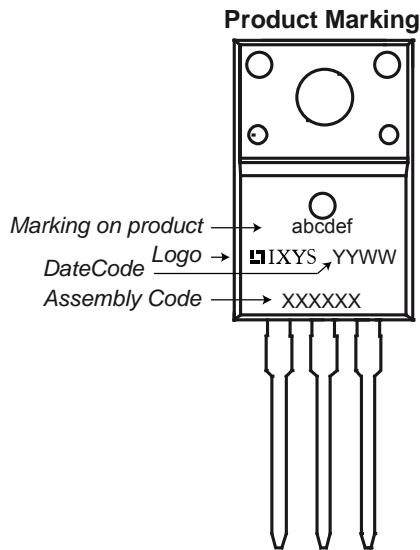
E72873

Ratings

Symbol	Definition	Conditions	min. typ. max.			Unit
V_{RRM}	max. repetitive reverse voltage				100	V
I_R	reverse current	$V_R = 100 \text{ V}$			0.2	μA
		$V_R = 100 \text{ V}$			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_{F0}	threshold voltage				0.46	V
r_F	slope resistance	} for power loss calculation only			17	$\text{m}\Omega$
R_{thJC}	thermal resistance junction to case				4.50	K/W
T_{VJ}	virtual junction temperature				-55	$^{\circ}\text{C}$
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 ¹⁾			35	A
R_{thCH}	thermal resistance case to heatsink			0.50		K/W
T_{stg}	storage temperature		-55		150	°C
Weight				2		g
M_D	mounting torque		0.4		0.8	Nm
F_C	mounting force with clip		20		60	N

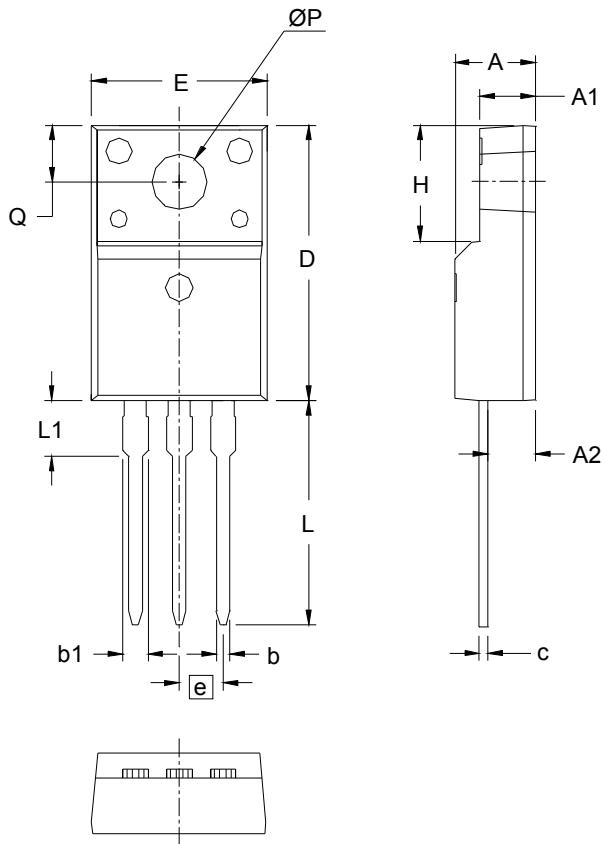
¹⁾ I_{RMS} is typically limited by: 1. pin-to-chip resistance; or by 2. current capability of the chip.
 In case of 1, a common cathode/anode configuration and a non-isolated backside, the whole current capability can be used by connecting the backside.


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
$\varnothing P$.121	.129	3.08	3.28
Q	.126	.134	3.20	3.40