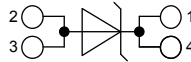


# Schottky Diode Gen<sup>2</sup>

High Performance Schottky Diode  
Low Loss and Soft Recovery  
Single Diode

Part number

**DSA 300 I 100 NA**



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

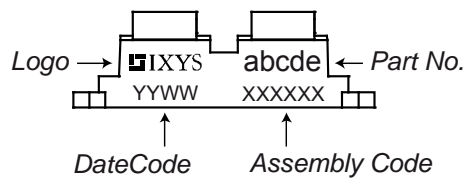
### Package:

- Housing: SOT-227B (minibloc)
- Industry standard outline
- Cu base plate internal DCB isolated
- Isolation Voltage 3000 V
- 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	$V_R = 100V$			2	mA	
		$V_R = 100V$			10	mA	
$V_F$	forward voltage	$I_F = 300A$			0.94	V	
		$I_F = 600A$			1.19	V	
		$I_F = 300A$	$T_{VJ} = 125^\circ C$			0.79	V
		$I_F = 600A$	$T_{VJ} = 125^\circ C$			1.06	V
$I_{FAV}$	average forward current	rectangular d = 0.5			300	A	
$V_{F0}$	threshold voltage				0.48	V	
$r_F$	slope resistance						
$R_{thJC}$	thermal resistance junction to case				0.20	K/W	
$T_{VJ}$	virtual junction temperature		-40		150	°C	
$P_{tot}$	total power dissipation				750	W	
$I_{FSM}$	max. forward surge current	t = 10 ms (50 Hz), sine			4800	A	
$C_J$	junction capacitance	$V_R = 12V$ ; f = 1 MHz		10.6		nF	

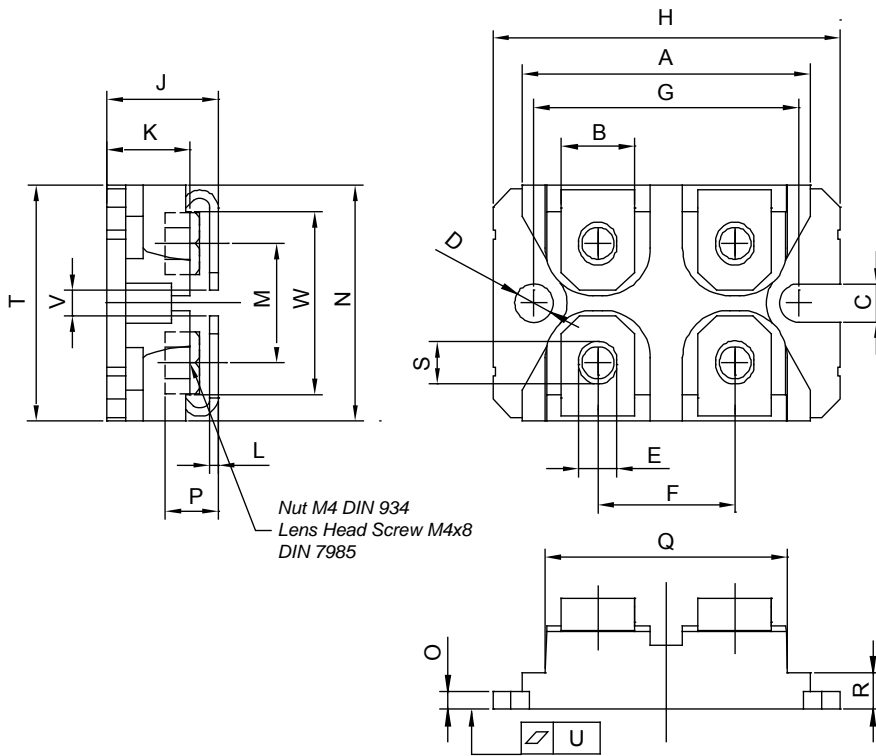
Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
$I_{RMS}$	RMS current	per pin			150	A
$R_{thCH}$	thermal resistance case to heatsink			0.10		K/W
$T_{stg}$	storage temperature		-40		150	°C
<b>Weight</b>				30		g
$M_D$	mounting torque		1.1		1.5	Nm
$M_T$	terminal torque		1.1		1.5	Nm
$V_{ISOL}$	isolation voltage	t = 1 second	3000			V
		t = 1 minute	2500			V
$d_s$	creepage distance on surface		8			mm
$d_A$	striking distance through air		4			mm

**Product Marking**

**Part number**

D = Diode  
 S = Schottky Diode  
 A = low VF  
 300 = Current Rating [A]  
 I = Single Diode  
 100 = Reverse Voltage [V]  
 NA = SOT-227B (minibloc)

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSA 300 I 100 NA	DSA300I100NA	Tube	10	509813

Similar Part	Package	Voltage class
DSA300I45NA	SOT-227B (minibloc)	45
DSA300I200NA	SOT-227B (minibloc)	200

**Outlines SOT-227B (minibloc)**


SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	31.50	31.88	1.240	1.255
B	7.80	8.20	.307	.323
C	4.09	4.29	.161	.169
D	4.09	4.29	.161	.169
E	4.09	4.29	.161	.169
F	14.91	15.11	.587	.595
G	30.12	30.30	1.186	1.193
H	37.80	38.23	1.489	1.505
J	11.68	12.22	.460	.481
K	8.92	9.60	.351	.378
L	0.76	0.84	.030	.033
M	12.60	12.85	.496	.506
N	25.15	25.42	.990	1.001
O	1.98	2.13	.078	.084
P	4.95	5.97	.195	.235
Q	26.54	26.90	1.045	1.059
R	3.94	4.42	.155	.174
S	4.72	4.85	.186	.191
T	24.59	25.07	.968	.987
U	-.05	.10	-.002	.004
V	3.30	4.57	.130	.180
W	19.81	21.08	.780	.830