

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[IXYS Corporation](#)  
[DSA30C100QB](#)

For any questions, you can email us directly:  
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



**DSA30C100QB**

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

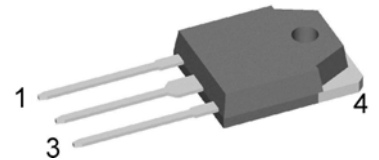
preliminary

$V_{RRM}$	=	100V
$I_{FAV}$	= 2x	15A
$V_F$	=	0.72V

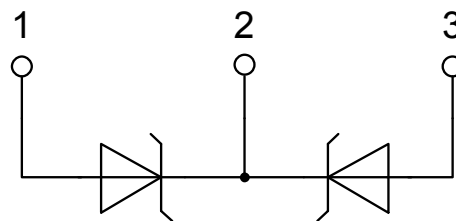
High Performance Schottky Diode  
Low Loss and Soft Recovery  
Common Cathode

Part number

**DSA30C100QB**



Backside: cathode



**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:** TO-3P

- Industry standard outline compatible with TO-247
- RoHS compliant
- Epoxy meets UL 94V-0

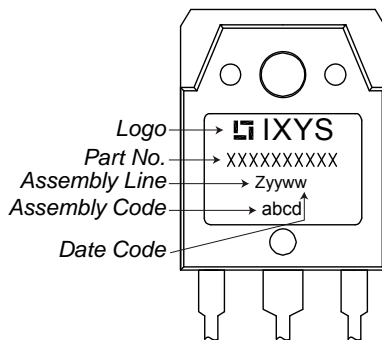
preliminary

Schottky				Ratings			
Symbol	Definition	Conditions	min.	typ.	max.	Unit	
$V_{RSM}$	max. non-repetitive reverse blocking voltage				100	V	
$V_{RRM}$	max. repetitive reverse blocking voltage				100	V	
$I_R$	reverse current, drain current	$V_R = 100\text{ V}$			250	$\mu\text{A}$	
		$V_R = 100\text{ V}$			2.5	mA	
$V_F$	forward voltage drop	$I_F = 15\text{ A}$			0.91	V	
		$I_F = 30\text{ A}$			1.06	V	
		$I_F = 15\text{ A}$	$T_{VJ} = 125^\circ\text{C}$			0.72	V
		$I_F = 30\text{ A}$	$T_{VJ} = 125^\circ\text{C}$			0.90	V
$I_{FAV}$	average forward current	$T_C = 150^\circ\text{C}$ rectangular $d = 0.5$			15	A	
$V_{F0}$	threshold voltage	} for power loss calculation only			0.46	V	
$r_F$	slope resistance				11.7	m $\Omega$	
$R_{thJC}$	thermal resistance junction to case				1.75	K/W	
$R_{thCH}$	thermal resistance case to heatsink			0.25		K/W	
$P_{tot}$	total power dissipation				85	W	
$I_{FSM}$	max. forward surge current	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}; V_R = 0\text{ V}$			340	A	
$C_J$	junction capacitance	$V_R = 12\text{ V}$ $f = 1\text{ MHz}$			146	pF	

preliminary

Package TO-3P			Ratings			
Symbol	Definition	Conditions	min.	typ.	max.	Unit
$I_{RMS}$	RMS current	per terminal <sup>1)</sup>			50	A
$T_{VJ}$	virtual junction temperature		-55		175	°C
$T_{op}$	operation temperature		-55		150	°C
$T_{stg}$	storage temperature		-55		150	°C
<b>Weight</b>				5		g
$M_D$	mounting torque		0.8		1.2	Nm
$F_C$	mounting force with clip		20		120	N

### Product Marking



### Part number

- D = Diode
- S = Schottky Diode
- A = low VF
- 30 = Current Rating [A]
- C = Common Cathode
- 100 = Reverse Voltage [V]
- QB = TO-3P (3)

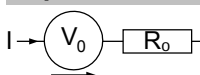
Ordering	Part Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	DSA30C100QB	DSA30C100QB	Tube	30	503339

Similar Part	Package	Voltage class
DSA30C100HB	TO-247AD (3)	100
DSA30C100PB	TO-220AB (3)	100
DSA30C100PN	TO-220ABFP (3)	100

### Equivalent Circuits for Simulation

\* on die level

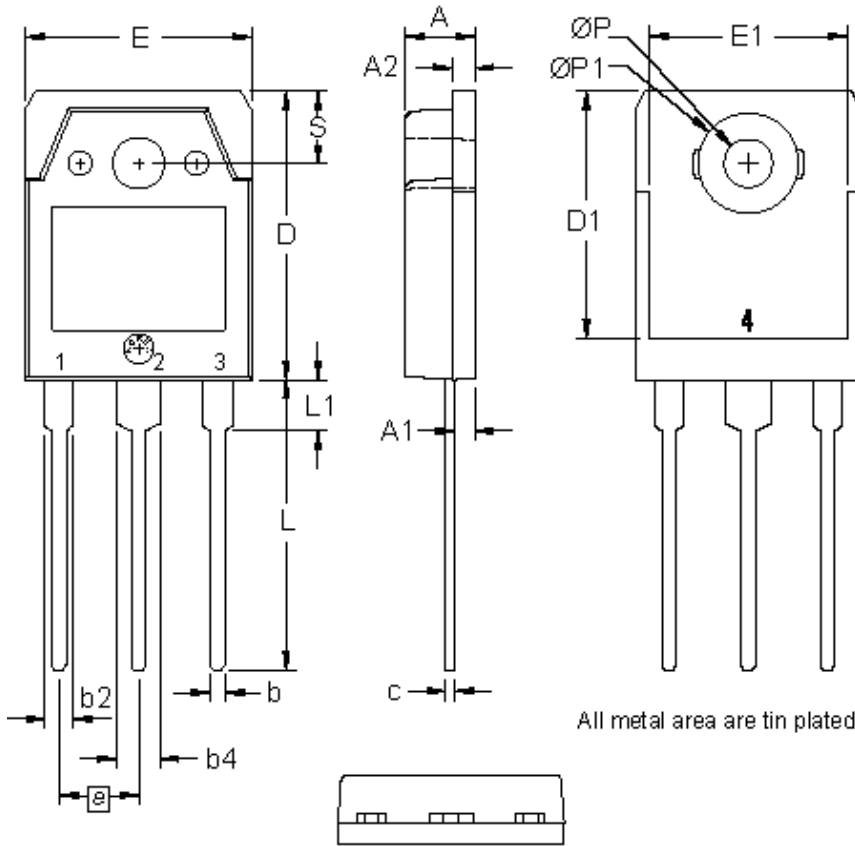
$T_{VJ} = 175^\circ\text{C}$



Schottky

$V_{0\max}$	threshold voltage	0.46	V
$R_{0\max}$	slope resistance *	9.1	mΩ

**Outlines TO-3P**



Dim.	Millimeter		Inches	
	min	max	min	max
A	4.70	4.90	0.185	0.193
A1	1.30	1.50	0.051	0.059
A2	1.45	1.65	0.057	0.065
b	0.90	1.15	0.035	0.045
b2	1.90	2.20	0.075	0.087
b4	2.90	3.20	0.114	0.126
c	0.55	0.80	0.022	0.031
D	19.80	20.10	0.780	0.791
D1	16.90	17.20	0.665	0.677
E	15.50	15.80	0.610	0.622
E1	13.50	13.70	0.531	0.539
e	5.45 BSC		0.215 BSC	
L	19.80	20.20	0.780	0.795
L1	3.40	3.60	0.134	0.142
Ø P	3.20	3.40	0.126	0.134
ØP1	6.90	7.10	0.272	0.280
S	4.90	5.10	0.193	0.201

