

Excellent Integrated System Limited

Stocking Distributor

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[IXYS Corporation](#)

[DSA50C150HB](#)

For any questions, you can email us directly:

sales@integrated-circuit.com



DSA50C150HB

Schottky Diode Gen²

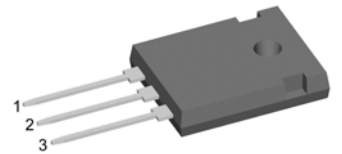
preliminary

V_{RRM}	=	150V
I_{FAV}	= 2x	25A
V_F	=	0.74V

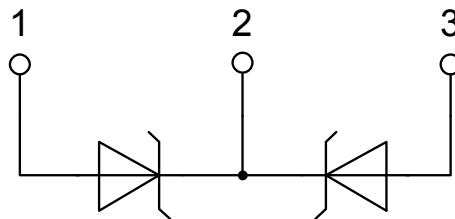
High Performance Schottky Diode
 Low Loss and Soft Recovery
 Common Cathode

Part number

DSA50C150HB



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-247

- Industry standard outline
- RoHS compliant
- Epoxy meets UL 94V-0

Schottky				Ratings			
Symbol	Definition	Conditions	min.	typ.	max.	Unit	
V_{RSM}	max. non-repetitive reverse blocking voltage				150	V	
V_{RRM}	max. repetitive reverse blocking voltage				150	V	
I_R	reverse current, drain current	$V_R = 150\text{ V}$			450	μA	
		$V_R = 150\text{ V}$			5	mA	
V_F	forward voltage drop	$I_F = 25\text{ A}$			0.88	V	
		$I_F = 50\text{ A}$			1.02	V	
		$I_F = 25\text{ A}$	$T_{VJ} = 125^\circ\text{C}$			0.74	V
		$I_F = 50\text{ A}$	$T_{VJ} = 125^\circ\text{C}$			0.90	V
I_{FAV}	average forward current	$T_C = 155^\circ\text{C}$ rectangular $d = 0.5$			25	A	
V_{F0}	threshold voltage	} for power loss calculation only			0.53	V	
r_F	slope resistance				5.8	m Ω	
R_{thJC}	thermal resistance junction to case				0.95	K/W	
R_{thCH}	thermal resistance case to heatsink			0.25		K/W	
P_{tot}	total power dissipation				160	W	
I_{FSM}	max. forward surge current	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}; V_R = 0\text{ V}$			390	A	
C_J	junction capacitance	$V_R = 24\text{ V}$ $f = 1\text{ MHz}$			161	pF	

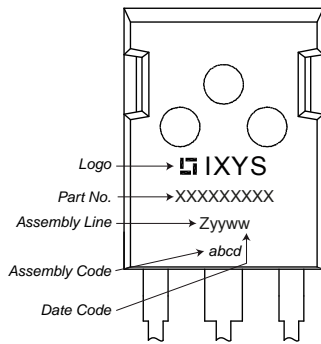


DSA50C150HB

preliminary

Package TO-247			Ratings			
Symbol	Definition	Conditions	min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal ¹⁾			50	A
T_{VJ}	virtual junction temperature		-55		175	°C
T_{op}	operation temperature		-55		150	°C
T_{stg}	storage temperature		-55		150	°C
Weight				6		g
M_D	mounting torque		0.8		1.2	Nm
F_C	mounting force with clip		20		120	N

Product Marking



Part number

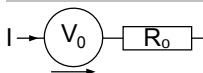
- D = Diode
- S = Schottky Diode
- A = low VF
- 50 = Current Rating [A]
- C = Common Cathode
- 150 = Reverse Voltage [V]
- HB = TO-247AD (3)

Ordering	Part Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	DSA50C150HB	DSA50C150HB	Tube	30	505450

Equivalent Circuits for Simulation

* on die level

$T_{VJ} = 175\text{ °C}$



Schottky

$V_{0\ max}$	threshold voltage	0.53	V
$R_{0\ max}$	slope resistance *	3.2	mΩ

Outlines TO-247

