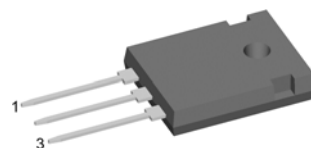
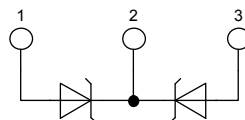


Schottky Diode

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSA 50 C 150 HB



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:

- Housing: TO-247
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Ratings

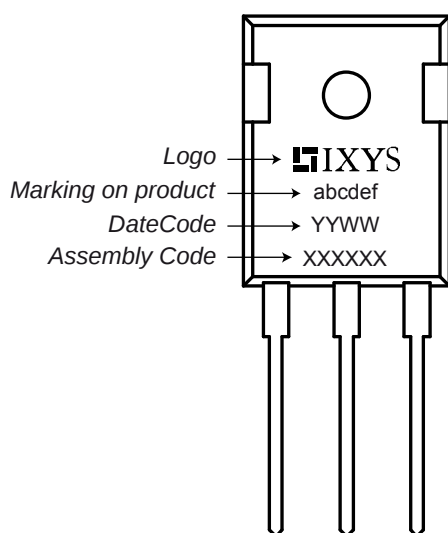
Symbol	Definition	Conditions		min.	typ.	max.	Unit
V_{RRM}	max. repetitive reverse voltage		$T_{VJ} = 25^\circ\text{C}$			150	V
I_R	reverse current	$V_R = 150\text{V}$	$T_{VJ} = 25^\circ\text{C}$			0.5	μA
		$V_R = 150\text{V}$	$T_{VJ} = 125^\circ\text{C}$			5	mA
V_F	forward voltage	$I_F = 25\text{A}$	$T_{VJ} = 25^\circ\text{C}$			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
		$I_F = 50\text{A}$				0.90	V
I_{FAV}	average forward current	rectangular, $d = 0.5$	$T_C = 155^\circ\text{C}$			25	A
V_{F0}	threshold voltage	} for power loss calculation only	$T_{VJ} = 175^\circ\text{C}$			0.53	V
r_F	slope resistance					5.8	$\text{m}\Omega$
R_{thJC}	thermal resistance junction to case					0.95	K/W
T_{VJ}	virtual junction temperature			-55		175	$^\circ\text{C}$
P_{tot}	total power dissipation		$T_C = 25^\circ\text{C}$			160	W
I_{FSM}	max. forward surge current	$t = 10\text{ ms}$ (50 Hz), sine	$T_{VJ} = 45^\circ\text{C}$			200	A
C_J	junction capacitance	$V_R = \text{tbd V}$; $f = 1\text{ MHz}$	$T_{VJ} = 25^\circ\text{C}$		tbd		pF

Symbol	Definition	Conditions	Ratings			
			min.	typ.	max.	Unit
I_{RMS}	RMS current	per pin ¹⁾			50	A
R_{thCH}	thermal resistance case to heatsink			0.25		K/W
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

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.

Product Marking



Part number

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

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSA 50 C 150 HB	DSA50C150HB	Tube		

Outlines TO-247
