advanced

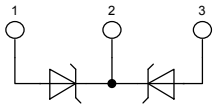
Schottky Diode Gen ²

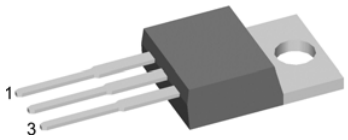
V_{RRM} = 200 V
I_{FAV} = 2x 15 A
V_F = 0.78 V

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSA 30 C 200 PB





Backside: cathode

Features / Advantages:

- Very low Vf
- Extremely low switching losses
- low Irm 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-220
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Ratings

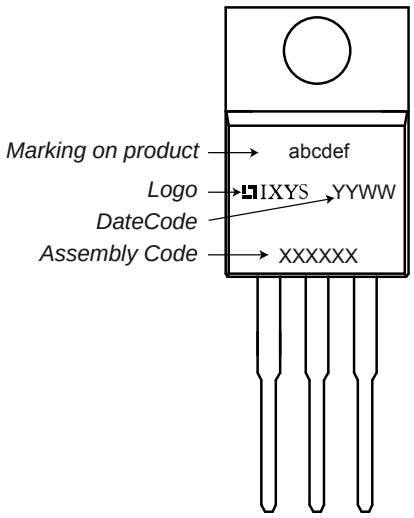
Symbol	Definition	Conditions		min.	typ.	max.	Unit
V_{RRM}	*max. repetitive reverse voltage*		T_{VJ} = 25°C			200	V
I_R	*reverse current*	V_R = 200 V	T_{VJ} = 25°C			0.25	mA
		V_R = 200 V	T_{VJ} = 125°C			2.5	mA
V_F	*forward voltage*	I_F = 15 A	T_{VJ} = 25°C			0.94	V
		I_F = 30 A				1.10	V
		I_F = 15 A	T_{VJ} = 125°C			0.78	V
		I_F = 30 A				0.95	V
I_{FAV}	*average forward current*	rectangular d = 0.5	T_C = 150°C			15	A
V_{F0}	*threshold voltage* } *for power loss calculation only*		T_{VJ} = 175°C			0.53	V
r_F	*slope resistance* }					10.8	mΩ
R_{thJC}	*thermal resistance junction to case*					1.75	K/W
T_{VJ}	*virtual junction temperature*			-55		175	°C
P_{tot}	*total power dissipation*		T_C = 25°C			85	W
I_{FSM}	*max. forward surge current*	t = 10 ms (50 Hz), sine	T_{VJ} = 45°C			120	A
C_J	*junction capacitance*	V_R = 24 V; f = 1 MHz	T_{VJ} = 25°C		67		pF

advanced

Symbol	Definition	Conditions	Ratings min.	typ.	max.	Unit
I_{RMS}	*RMS current*	per terminal [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		0.6	Nm
F_C	*mounting force with clip*		20		60	N

[1] I_{RMS} is typically limited by the pin-to-chip resistance (1); or by the current capability of the chip (2). In case of (1) and a common cathode/anode configu ration with a non-isolated backside, the current capability can be increased by connecting the backside.

Product Marking

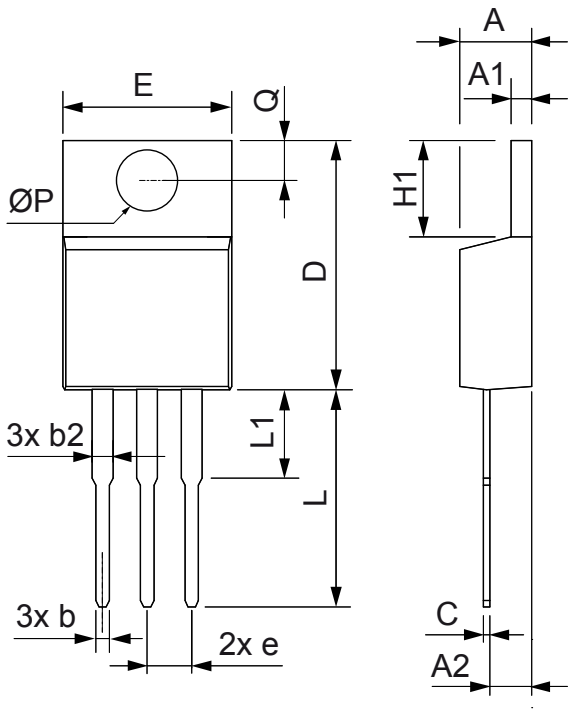


Part number

D = Diode
S = Schottky Diode
A = low VF
30 = Current Rating [A]
C = Common Cathode
200 = Reverse Voltage [V]
PB = TO-220AB (3)

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSA 30 C 200 PB	DSA30C200PB	Tube	50	507014

Outlines TO-220



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.32	4.82	0.170	0.190
A1	1.14	1.39	0.045	0.055
A2	2.29	2.79	0.090	0.110
b	0.64	1.01	0.025	0.040
b2	1.15	1.65	0.045	0.065
C	0.35	0.56	0.014	0.022
D	14.73	16.00	0.580	0.630
E	9.91	10.66	0.390	0.420
e	2.54	BSC	0.100	BSC
H1	5.85	6.85	0.230	0.270
L	12.70	13.97	0.500	0.550
L1	2.79	5.84	0.110	0.230
ØP	3.54	4.08	0.139	0.161
Q	2.54	3.18	0.100	0.125