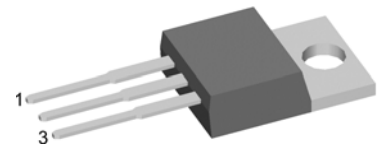
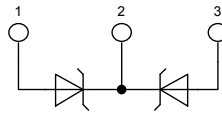


Schottky Diode Gen²

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSA 30 C 150 PB



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

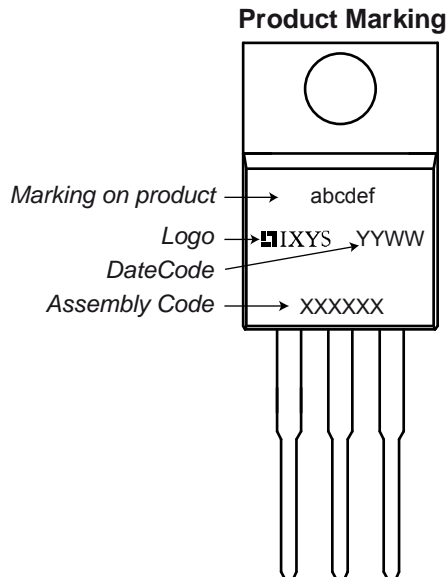
Package:

- Housing: TO-220
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
V_{RRM}	max. repetitive reverse voltage				150	V
I_R	reverse current	$V_R = 150\text{V}$			0.5	mA
		$V_R = 150\text{V}$			2.5	mA
V_F	forward voltage	$I_F = 15\text{A}$			0.89	V
		$I_F = 30\text{A}$			1.02	V
		$I_F = 15\text{A}$			0.75	V
		$I_F = 30\text{A}$			0.89	V
I_{FAV}	average forward current	rectangular $d = 0.5$			15	A
V_{F0}	threshold voltage				0.55	V
r_F	slope resistance				8.8	m Ω
R_{thJC}	thermal resistance junction to case				1.75	K/W
T_{VJ}	virtual junction temperature		-55		175	$^{\circ}\text{C}$
P_{tot}	total power dissipation				85	W
I_{FSM}	max. forward surge current	$t = 10\text{ms}$ (50 Hz), sine			120	A
C_J	junction capacitance	$V_R = 24\text{V}$; $f = 1\text{MHz}$		82		pF
E_{AS}	non-repetitive avalanche energy	$I_{AS} = 1\text{A}$; $L = 100\text{ }\mu\text{H}$			0.05	mJ
I_{AR}	repetitive avalanche current	$V_A = 1.5 \cdot V_R$ typ.: $f = 10\text{kHz}$			0.1	A

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
I_{RMS}	RMS current	per pin 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		0.8	Nm
F_C	mounting force with clip		20		60	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.

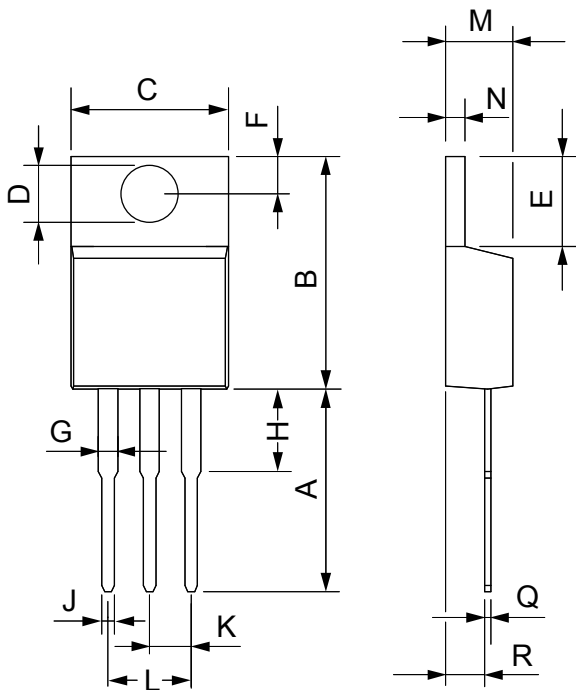

Part number

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

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSA 30 C 150 PB	DSA30C150PB	Tube	50	505443

Similar Part	Package	Voltage class
DSA30C150HB	TO-247	150

Outlines TO-220



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	12.70	13.97	0.500	0.550
B	14.73	16.00	0.580	0.630
C	9.91	10.66	0.390	0.420
D	3.54	4.08	0.139	0.161
E	5.85	6.85	0.230	0.270
F	2.54	3.18	0.100	0.125
G	1.15	1.65	0.045	0.065
H	2.79	5.84	0.110	0.230
J	0.64	1.01	0.025	0.040
K	2.54	BSC	0.100	BSC
M	4.32	4.82	0.170	0.190
N	1.14	1.39	0.045	0.055
Q	0.35	0.56	0.014	0.022
R	2.29	2.79	0.090	0.110