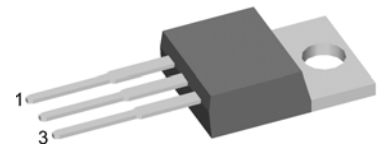
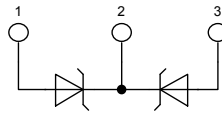


Schottky Diode Gen²

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSA 60 C 45 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

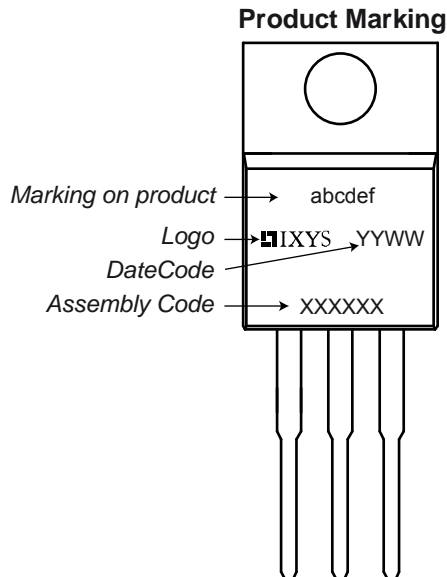
Package:

- 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				45	V
I_R	reverse current	$V_R = 45V$			0.9	mA
		$V_R = 45V$			5	mA
V_F	forward voltage	$I_F = 30A$			0.79	V
		$I_F = 60A$			0.99	V
		$I_F = 30A$			0.67	V
		$I_F = 60A$			0.88	V
I_{FAV}	average forward current	rectangular d = 0.5			30	A
V_{F0}	threshold voltage				0.42	V
r_F	slope resistance				6.6	mΩ
R_{thJC}	thermal resistance junction to case				0.85	K/W
T_{VJ}	virtual junction temperature		-55		175	°C
P_{tot}	total power dissipation				175	W
I_{FSM}	max. forward surge current	t = 10 ms (50 Hz), sine			280	A
C_J	junction capacitance	$V_R = 5V$; f = 1 MHz		980		pF
E_{AS}	non-repetitive avalanche energy	$I_{AS} = 20A$; L = 180 μH			20	mJ
I_{AR}	repetitive avalanche current	$V_A = 1.5 \cdot V_R$ typ.: f = 10 kHz			1.5	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		0.6	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.

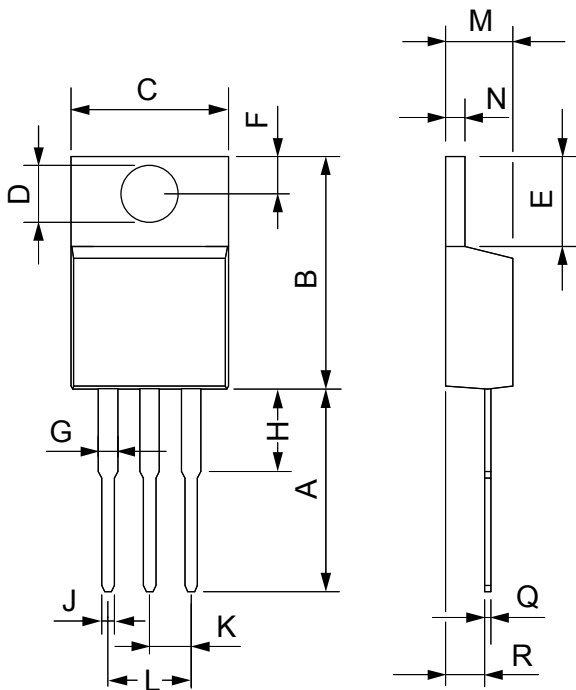


Part number

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

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSA 60 C 45 PB	DSA60C45PB	Tube	50	505556

Similar Part	Package	Voltage class
DSA60C45HB	TO-247	45

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