

Excellent Integrated System Limited

Stocking Distributor

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[IXYS Corporation](#)
[DSA60C45PB](#)

For any questions, you can email us directly:

sales@integrated-circuit.com



DSA60C45PB

preliminary

Schottky Diode Gen ²

$$V_{RRM} = 45V$$

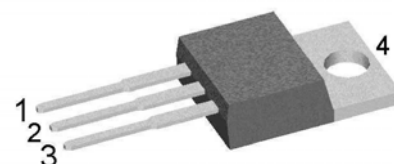
$$I_{FAV} = 2 \times 30A$$

$$V_F = 0.67V$$

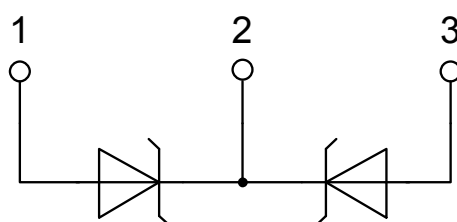
High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSA60C45PB



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-220

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

preliminary

Schottky				Ratings			
Symbol	Definition	Conditions		min.	typ.	max.	Unit
V _{RSM}	max. non-repetitive reverse blocking voltage	T _{VJ} = 25°C				45	V
V _{RRM}	max. repetitive reverse blocking voltage	T _{VJ} = 25°C				45	V
I _R	reverse current, drain current	V _R = 45 V	T _{VJ} = 25°C			450	μA
		V _R = 45 V	T _{VJ} = 125°C			5	mA
V _F	forward voltage drop	I _F = 30 A	T _{VJ} = 25°C			0.79	V
		I _F = 60 A				0.99	V
		I _F = 30 A	T _{VJ} = 125°C			0.67	V
		I _F = 60 A				0.88	V
I _{FAV}	average forward current	T _C = 155°C rectangular	T _{VJ} = 175°C d = 0.5			30	A
V _{F0}	threshold voltage	} for power loss calculation only				0.42	V
r _F	slope resistance					6.6	mΩ
R _{thJC}	thermal resistance junction to case					0.85	K/W
R _{thCH}	thermal resistance case to heatsink				0.50		K/W
P _{tot}	total power dissipation	T _C = 25°C				175	W
I _{FSM}	max. forward surge current	t = 10 ms; (50 Hz), sine; V _R = 0 V				490	A
C _J	junction capacitance	V _R = 5 V f = 1 MHz			980		pF

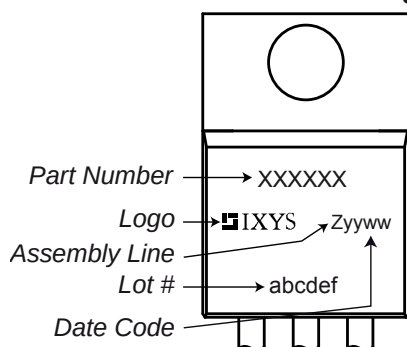


DSA60C45PB

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Package TO-220			Ratings			
Symbol	Definition	Conditions	min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal ¹⁾			35	A
T_{VJ}	virtual junction temperature		-55		175	°C
T_{op}	operation temperature		-55		150	°C
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

Product Marking



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)

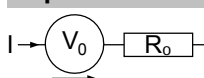
Ordering	Part Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	DSA60C45PB	DSA60C45PB	Tube	50	505556

Similar Part	Package	Voltage class
DSA60C45HB	TO-247AD (3)	45

Equivalent Circuits for Simulation

* on die level

$T_{VJ} = 175^{\circ}\text{C}$



Schottky

$V_{0\max}$ threshold voltage 0.42

$R_{0\max}$ slope resistance * 3.4

V

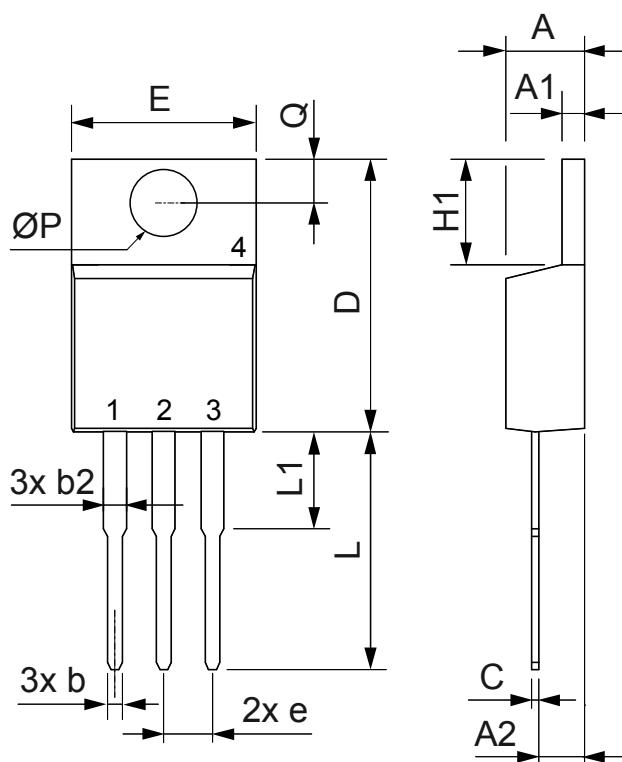
mΩ

IXYS

DSA60C45PB

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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

