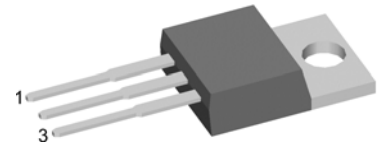
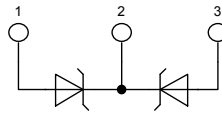


Schottky Diode Gen²

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSB 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

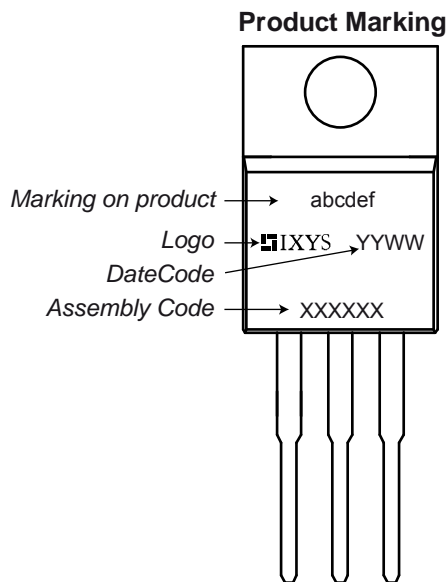
Package:

- 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	$V_R = 45V$			10	mA	
		$V_R = 45V$			100	mA	
V_F	forward voltage	$I_F = 30A$			0.63	V	
		$I_F = 60A$			0.91	V	
		$I_F = 30A$	$T_{VJ} = 125^\circ C$			0.60	V
		$I_F = 60A$	$T_{VJ} = 125^\circ C$			0.89	V
I_{FAV}	average forward current	rectangular d = 0.5			30	A	
V_{F0}	threshold voltage	} for power loss calculation only			0.31	V	
r_F	slope resistance				9.3	mΩ	
R_{thJC}	thermal resistance junction to case				0.85	K/W	
T_{VJ}	virtual junction temperature		-55		150	°C	
P_{tot}	total power dissipation				145	W	
I_{FSM}	max. forward surge current	t = 10 ms (50 Hz), sine			320	A	
C_J	junction capacitance	$V_R = 5V$; f = 1 MHz		980		pF	

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
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

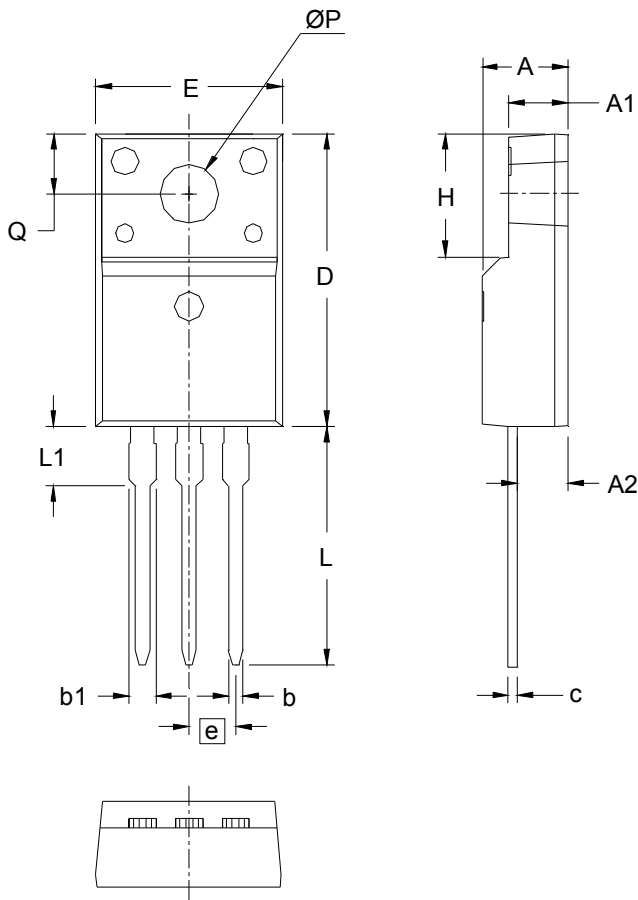
¹⁾ I_{RMS} is typically limited by the pin-to-chip resistance (1); or by the current capability of the chip (2).
 In case of (1) and a common cathode/anode configuration with a non-isolated backside, the current capability can be increased by connecting the backside.


Part number

D = Diode
 S = Schottky Diode
 B = ultra 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	DSB 60 C 45 PB	DSB60C45PB	Tube	50	505570

Similar Part	Package	Voltage class
DSB60C45HB	TO-247AD (3)	45

Outlines TO-220


SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.177	.193	4.50	4.90
A1	.092	.108	2.34	2.74
A2	.101	.117	2.56	2.96
b	.028	.035	0.70	0.90
b1	.050	.058	1.27	1.47
c	.018	.024	0.45	0.60
D	.617	.633	15.67	16.07
E	.392	.408	9.96	10.36
e	.100 BSC		2.54 BSC	
H	.255	.271	6.48	6.88
L	.499	.523	12.68	13.28
L1	.119	.135	3.03	3.43
ØP	.121	.129	3.08	3.28
Q	.126	.134	3.20	3.40

