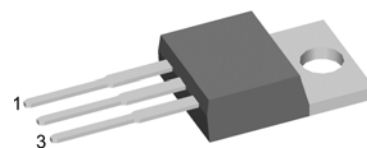
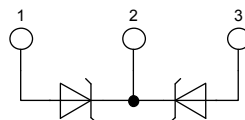


Schottky Diode

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSB 40 C 15 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

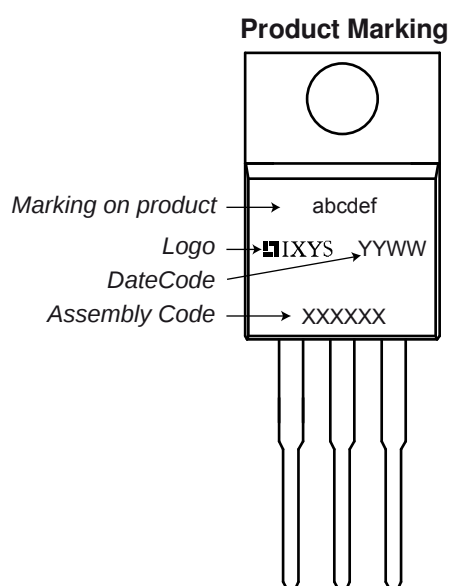
Ratings

Symbol	Definition	Conditions		min.	typ.	max.	Unit
V_{RRM}	max. repetitive reverse voltage		$T_{VJ} = 25^\circ\text{C}$			15	V
I_R	reverse current	$V_R = 15\text{V}$	$T_{VJ} = 25^\circ\text{C}$			10	μA
		$V_R = 15\text{V}$	$T_{VJ} = 100^\circ\text{C}$			40	mA
V_F	forward voltage	$I_F = 20\text{A}$	$T_{VJ} = 25^\circ\text{C}$			0.48	V
		$I_F = 40\text{A}$				0.60	V
		$I_F = 20\text{A}$	$T_{VJ} = 125^\circ\text{C}$			0.39	V
		$I_F = 40\text{A}$				0.54	V
I_{FAV}	average forward current	rectangular, $d = 0.5$	$T_C = 130^\circ\text{C}$			20	A
V_{F0}	threshold voltage	} for power loss calculation only	$T_{VJ} = 150^\circ\text{C}$			0.23	V
r_F	slope resistance					7.2	$\text{m}\Omega$
R_{thJC}	thermal resistance junction to case					1.75	K/W
T_{VJ}	virtual junction temperature			-55		150	$^\circ\text{C}$
P_{tot}	total power dissipation		$T_C = 25^\circ\text{C}$			70	W
I_{FSM}	max. forward surge current	$t = 10\text{ ms}$ (50 Hz), sine	$T_{VJ} = 45^\circ\text{C}$			160	A
C_J	junction capacitance	$V_R = \text{tbd V}$; $f = 1\text{ MHz}$	$T_{VJ} = 25^\circ\text{C}$		tbd		pF

Symbol	Definition	Conditions	Ratings			
			min.	typ.	max.	Unit
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.

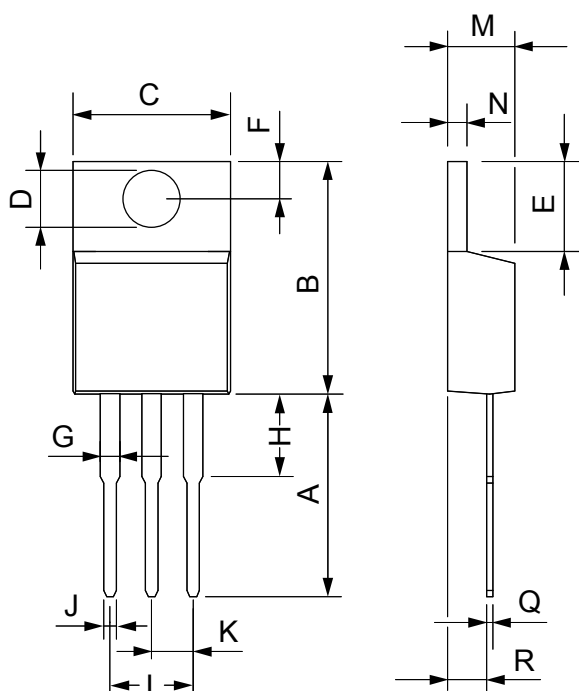


Part number

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

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSB 40 C 15 PB	DSB40C15PB	Tube	50	502802

Similar Part	Package	Voltage class
DSSK40-0015B	TO-247	15

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