

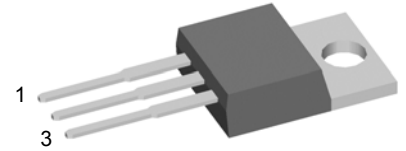
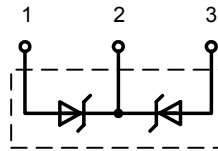
Schottky

High Performance Schottky Diode
 Low Loss and Soft Recovery
 Common Cathode

$V_{RRM} = 15 \text{ V}$
 $I_{FAV} = 2 \times 20 \text{ A}$
 $V_F = 0.45 \text{ V}$

Part name (Marking on product)

DSB 40C 15PB



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
- Low losses

Applications:

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters

Package:

- TO-220
- industry standard outline
 - Epoxy meets UL 94V-0
 - RoHS compliant

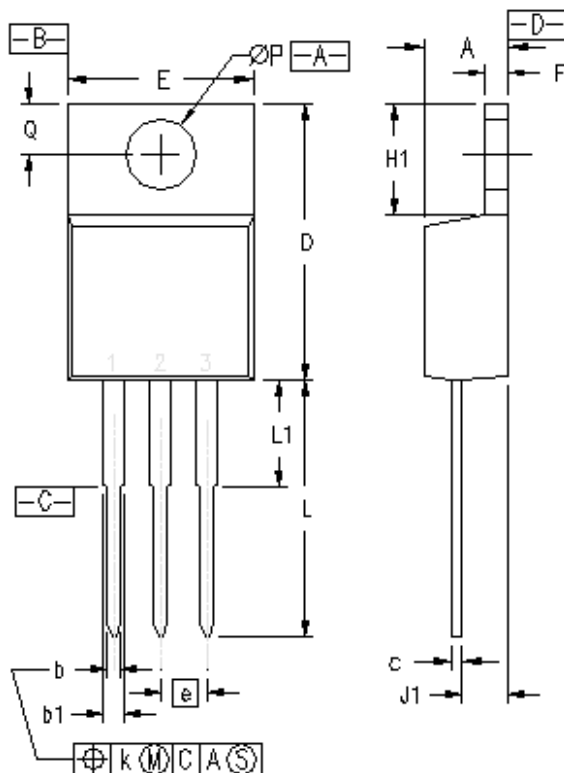
Ratings

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
V_{RRM}	max. repetitive reverse voltage	$T_{VJ} = 25 \text{ }^\circ\text{C}$			15	V
I_R	reverse current	$V_R = 15 \text{ V}$			10	mA
		$V_R = 15 \text{ V}$			40	mA
V_F	forward voltage	$I_F = 20 \text{ A}$			0.53	V
		$I_F = 40 \text{ A}$			0.7	V
		$I_F = 20 \text{ A}$			0.45	V
		$I_F = 40 \text{ A}$			0.66	V
I_{FAV}	average forward current	DC			20	A
V_{F0}					0.25	V
r_F					8.5	m Ω
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	$T_C = 25 \text{ }^\circ\text{C}$			70	W
I_{FSM}	max. forward surge current	$t_p = 10 \text{ ms (50 Hz), sine}$			160	A
C_j	Junction capacitance	$V_R = \text{ V}$				nF
E_{AS}	non-repetitive avalanche energy	non repetitive $I_{AS} = \text{ A}; L = 100 \mu\text{H}$			tbd	mJ
I_{AR}	repetitive avalanche current	$V_A = 1.5 \cdot V_R$ typ.; $f = 10 \text{ kHz}$; repetitive			tbd	A

* Data according to IEC 60747 and per diode unless otherwise specified

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
I_{RMS}	RMS current	per pin*			35	A
R_{thCH}	thermal resistance case to heatsink			0.5		K/W
M_D	mounting torque		0.4		0.6	Nm
T_{stg}	storage temperature		-55		150	°C
Weight				2		g

* I_{RMS} is typically limited by pin to chip resistance 1 or by the current capability of the chip 2.
 In case of 1 and a common cathode/anode configuration the complete current capability can be used by connecting the backside.



SYM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.170	.190	4.32	4.83
b	.025	.040	0.64	1.02
b1	.045	.065	1.15	1.65
c	.014	.022	0.35	0.56
D	.580	.630	14.73	16.00
E	.390	.420	9.91	10.66
e	.100 BSC		2.54 BSC	
F	.045	.055	1.14	1.40
H1	.230	.270	5.85	6.85
J1	.090	.110	2.29	2.79
k	0	.015	0	0.38
L	.500	.550	12.70	13.97
L1	.110	.230	2.79	5.84
ØP	.139	.161	3.53	4.08
Q	.100	.125	2.54	3.18

NOTE: This drawing will meet all dimensions requirement of JEDEC outline TO-220 AB.