preliminary

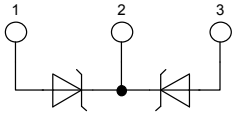
Schottky Diode

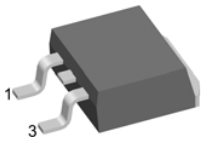
V_{RRM} = 25 V
I_{FAV} = 2x 10 A
V_F = 0.37 V

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSSK18-0025BS





Backside: cathode

Features / Advantages:

- Very low Vf
- Extremely low switching losses
- low Irm 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-263 (D2Pak)
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Symbol	Definition	Conditions		Ratings min.	typ.	max.	Unit
V_{RRM}	*max. repetitive reverse voltage*		T_{VJ} = 25°C			25	V
I_R	*reverse current*	V_R = 25 V	T_{VJ} = 25°C			10	mA
		V_R = 25 V	T_{VJ} = 100°C			40	mA
V_F	*forward voltage*	I_F = 10 A	T_{VJ} = 25°C			0.45	V
		I_F = 20 A				0.56	V
		I_F = 10 A	T_{VJ} = 125°C			0.37	V
		I_F = 20 A				0.51	V
I_{FAV}	*average forward current*	rectangular, d = 0.5	T_C = 140°C			10	A
V_{F0}	*threshold voltage* } *for power loss calculation only*		T_{VJ} = 150°C			0.20	V
r_F	*slope resistance* }					14.6	mΩ
R_{thJC}	*thermal resistance junction to case*					1.70	K/W
T_{VJ}	*virtual junction temperature*			-55		150	°C
P_{tot}	*total power dissipation*		T_C = 25°C			75	W
I_{FSM}	*max. forward surge current*	t = 10 ms (50 Hz), sine	T_{VJ} = 45°C			140	A
C_J	*junction capacitance*	V_R = tbd V; f = 1 MHz	T_{VJ} = 25°C		tbd		pF

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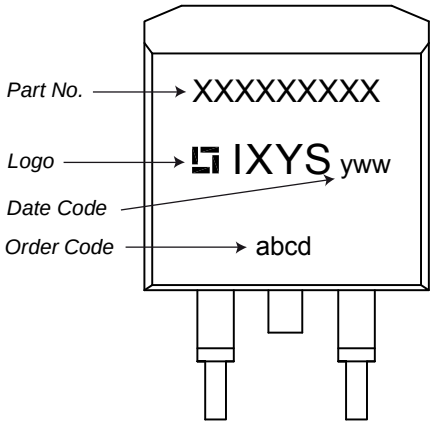
Symbol	Definition	Conditions	Ratings min.	typ.	max.	Unit
I_{RMS}	*RMS current*	per pin [1]			35	A
R_{thCH}	*thermal resistance case to heatsink*			0.25		K/W
T_{stg}	*storage temperature*		-55		150	°C
Weight				2		g
F_C	*mounting force with clip*		20		60	N

[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.

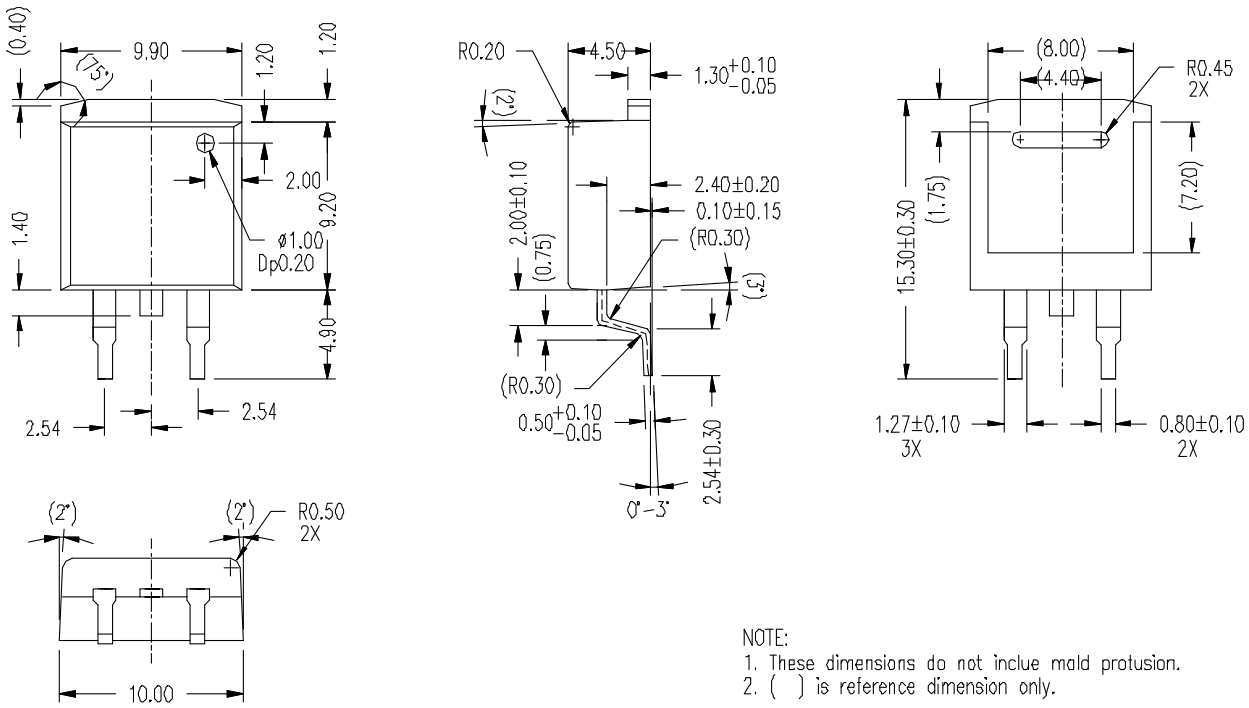
Product Marking



Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSSK18-0025BS	DSSK18-0025BS	Tape and Reel	800	499099

Similar Part	Package	Voltage class
DSB30C30PB	TO-220	30

Outlines TO-263 (D2Pak)



NOTE:
1. These dimensions do not inclue mald protusion.
2. ( ) is reference dimension only.