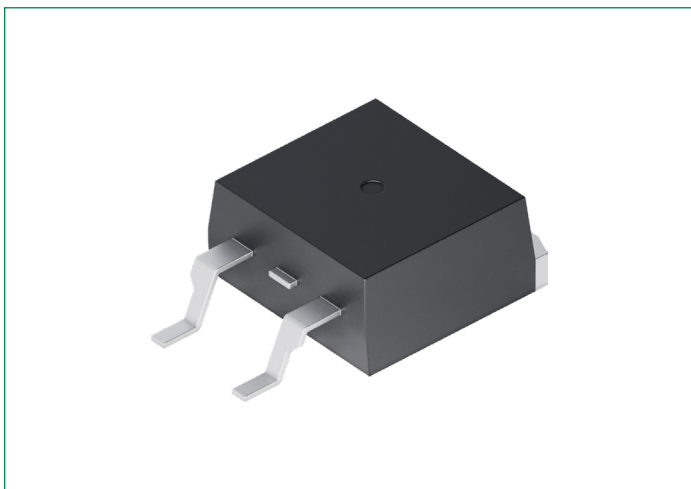


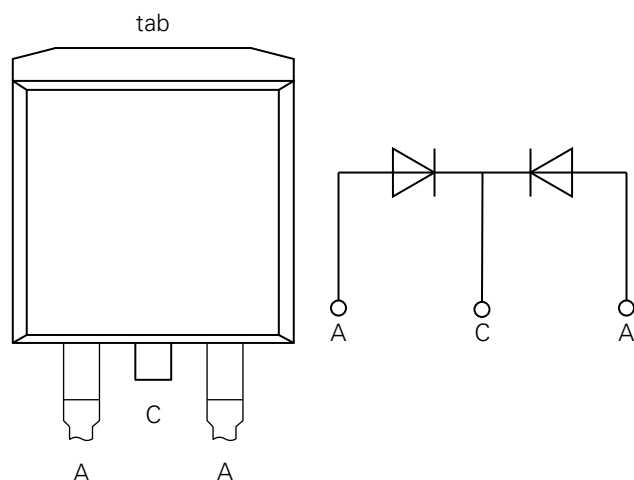
DSSK18-0025BS

25 V, 18 A Schottky Rectifier Diode

RoHS



Pinout Diagram (TO-263AB)



C: Cathode; **A:** Anode; **tab:** Cathode

Features

- Extremely low switching losses
- Very low V_F
- Low I_{RM} values

Benefits

- Low voltage peaks for reduced protection circuits
- High reliability circuit operation
- Low-noise switching
- Improved thermal behavior
- Longer lifetime of the system

Applications

- Rectifiers in Switch Mode Power Supplies (SMPS)
- Free wheeling diode in low voltage converters

Package

- Terminals finish: 100% pure tin
- RoHS compliant
- Epoxy meets UL 94V-0

Product Summary

Characteristic	Value	Unit
V_{RRM}	25	V
$I_{F(AV)}$	2×10	A
V_F	0.37	V

Maximum Ratings ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Symbol	Characteristics	Condition	Max.	Units
V_{RRM}	Peak Repetitive Reverse Voltage	–	25	V
V_{RWM}	Working Peak Reverse Voltage			
V_R	DC Blocking Voltage			
$I_{F(AV)}$	Average Rectified Forward Current	50% duty cycle @ $T_c = 140\text{ }^{\circ}\text{C}$, rectangular wave form	10 (Per Leg)	A
			20 (Per Device)	
I_{FSM}	Peak One Cycle Non-Repetitive Surge Current (Per Leg)	10 ms, Half Sine pulse, $T_{vj} = 25\text{ }^{\circ}\text{C}$	140	A
P_{tot}	Total Power Dissipation	$T_c = 25\text{ }^{\circ}\text{C}$	75	W

Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Symbol	Characteristics	Conditions	Typ.	Max.	Units
V_{F1}	Forward Voltage Drop (Per Leg) ¹	@ 10 A, Pulse, $T_{vj} = 25\text{ }^{\circ}\text{C}$	–	0.45	V
V_{F2}		@ 10 A, Pulse, $T_{vj} = 125\text{ }^{\circ}\text{C}$	–	0.37	V
I_{R1}	Reverse Current (Per Leg)*	@ $V_R = \text{rated } V_R$, $T_{vj} = 25\text{ }^{\circ}\text{C}$	–	10	mA
I_{R2}		@ $V_R = \text{rated } V_R$, $T_{vj} = 100\text{ }^{\circ}\text{C}$	–	40	mA
C_j	Junction Capacitance (Per Leg)	@ $V_R = 5\text{ V}$, $T_c = 25\text{ }^{\circ}\text{C}$ $f_{SIG} = 1\text{ MHz}$	661	–	pF

Note 1: Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications

Symbol	Characteristics	Condition	Specification	Units
T_{vj}	Junction Temperature	–	-55 to +150	$^{\circ}\text{C}$
T_O	Operation Temperature	–	-55 to +125	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	–	-55 to +150	$^{\circ}\text{C}$
F_C	Mounting force with clip	–	Min 20 Max 60	N
$R_{th(j-c)}$	Maximum Thermal Resistance Junction to Case	DC operation	1.70	K/W
$R_{th(c-h)}$	Typical Thermal Resistance Case to Heat Sink	–	0.25	K/W
wt	Approximate Weight	–	1.85	g

Characteristic Curves

Fig. 1. Typical Forward Characteristics

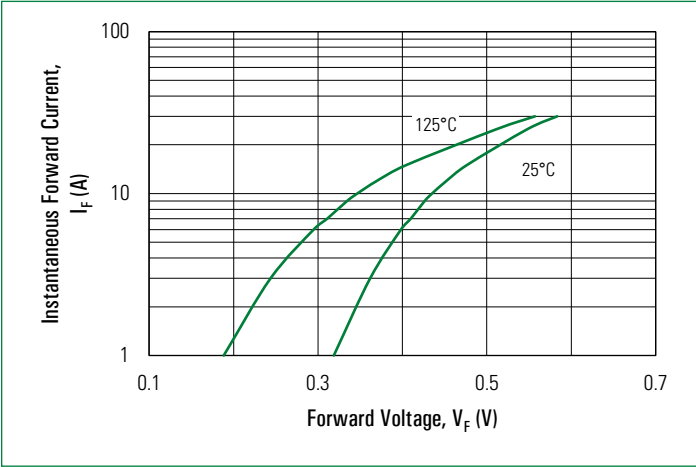


Fig. 2. Typical Reverse Characteristics

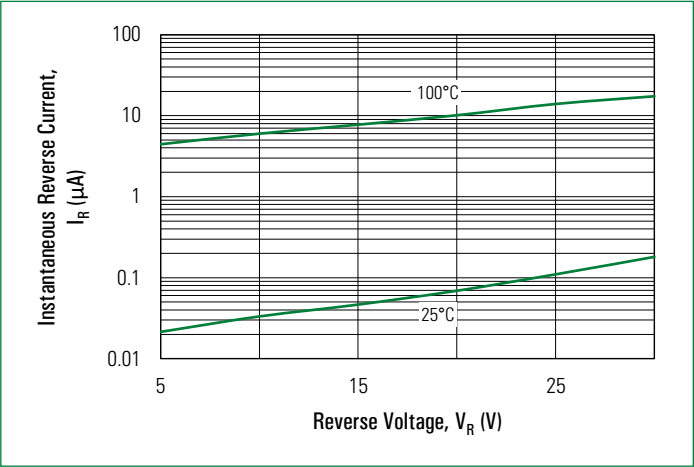
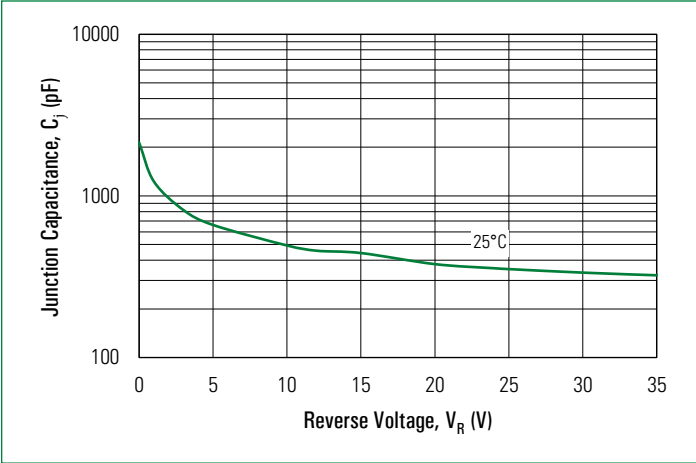
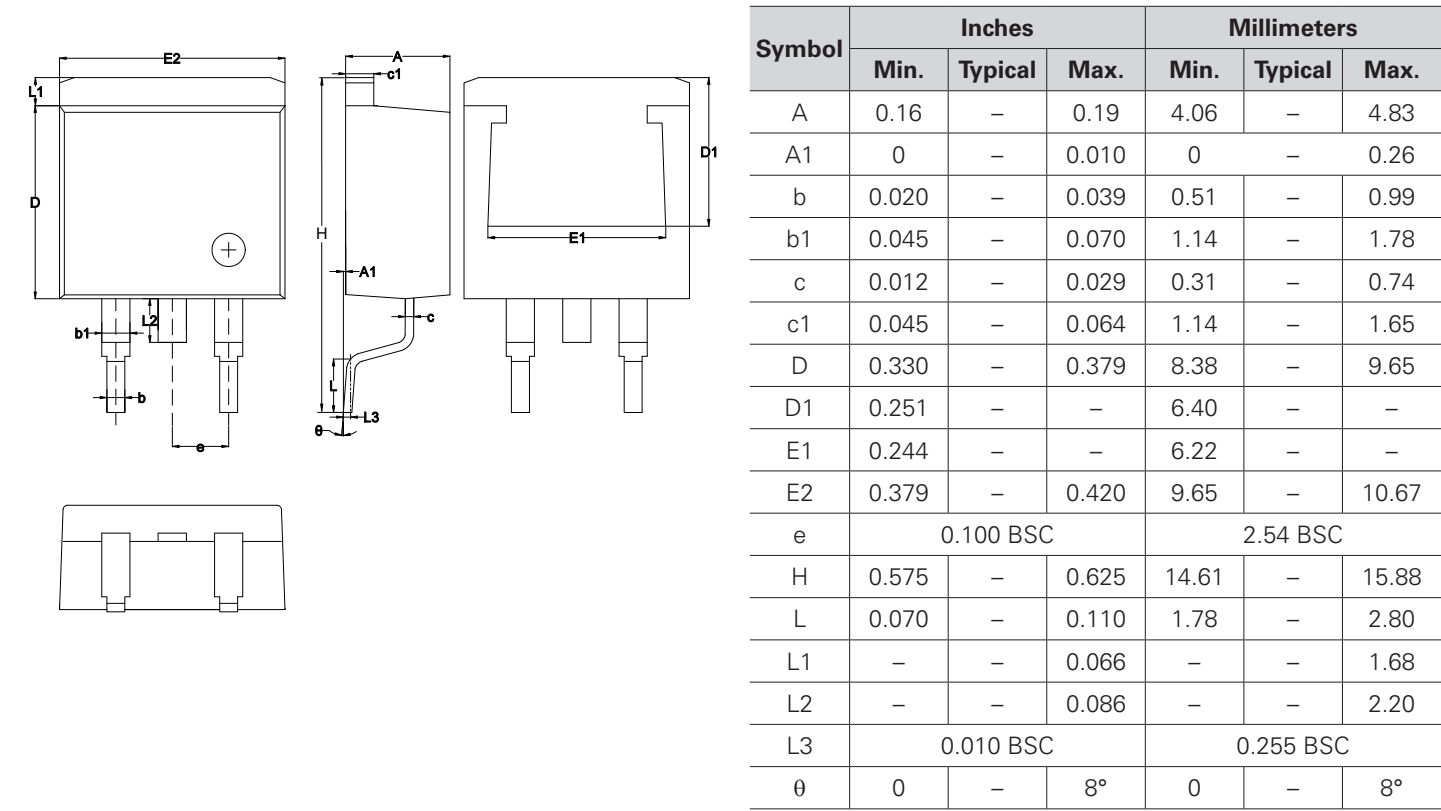


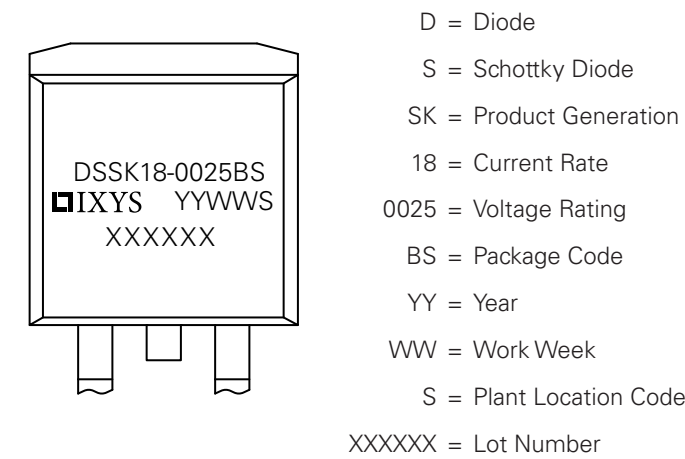
Fig. 3. Typical Junction Capacitance



Part Outline Drawing (TO-263AB)



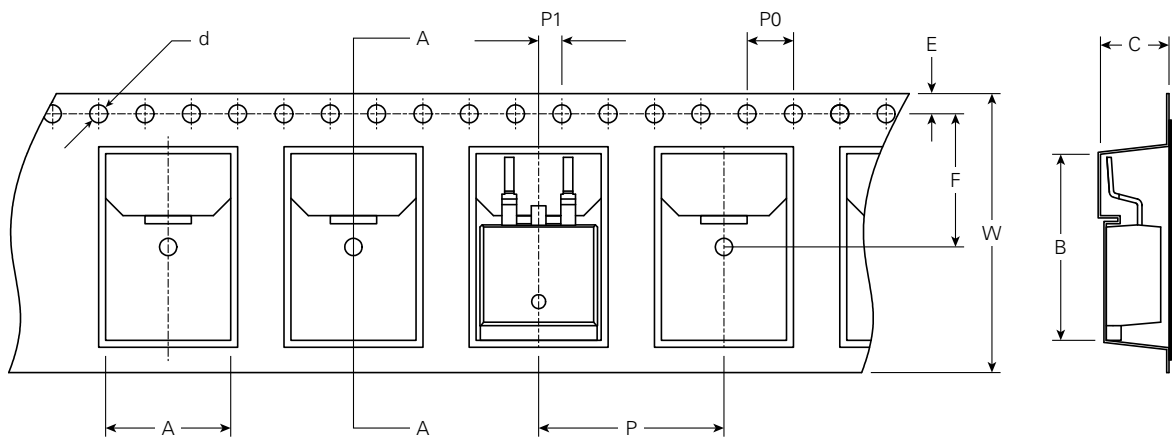
Part Number and Marking



Ordering Information

Part Number	Marking	Packing Mode	Quantity
DSSK18-0025BS-TRL	DSSK18-0025BS	Reel	800 pcs/reel

Carrier Tape Specification (TO-263AB)



Symbol	Inches			Millimeters		
	Min.	Typical	Max.	Min.	Typical	Max.
A	0.421	–	0.429	10.70	–	10.90
B	0.631	–	0.639	16.03	–	16.23
C	0.201	–	0.209	5.11	–	5.31
d	0.057	–	0.065	1.45	–	1.65
E	0.065	–	0.07	1.65	–	1.85
F	0.449	–	0.457	11.40	–	11.60
P0	0.153	–	0.161	3.90	–	4.10
P	0.626	–	0.664	15.90	–	16.10
P1	0.075	–	0.082	1.90	–	2.10
W	0.941	–	0.957	23.90	–	24.30

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Part of:

