

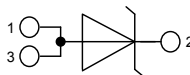
preliminary

Schottky Diode

High Performance Schottky Diode
Low Loss and Soft Recovery
Single Diode

Part number

DSS6-0025BS



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:

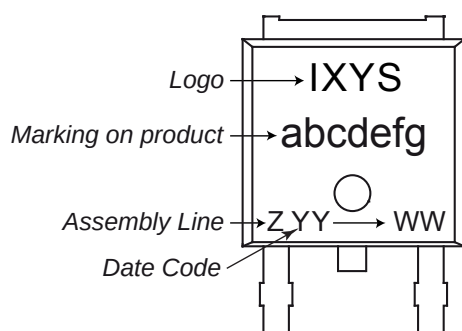
- Housing: TO-252 (DPak)
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Ratings

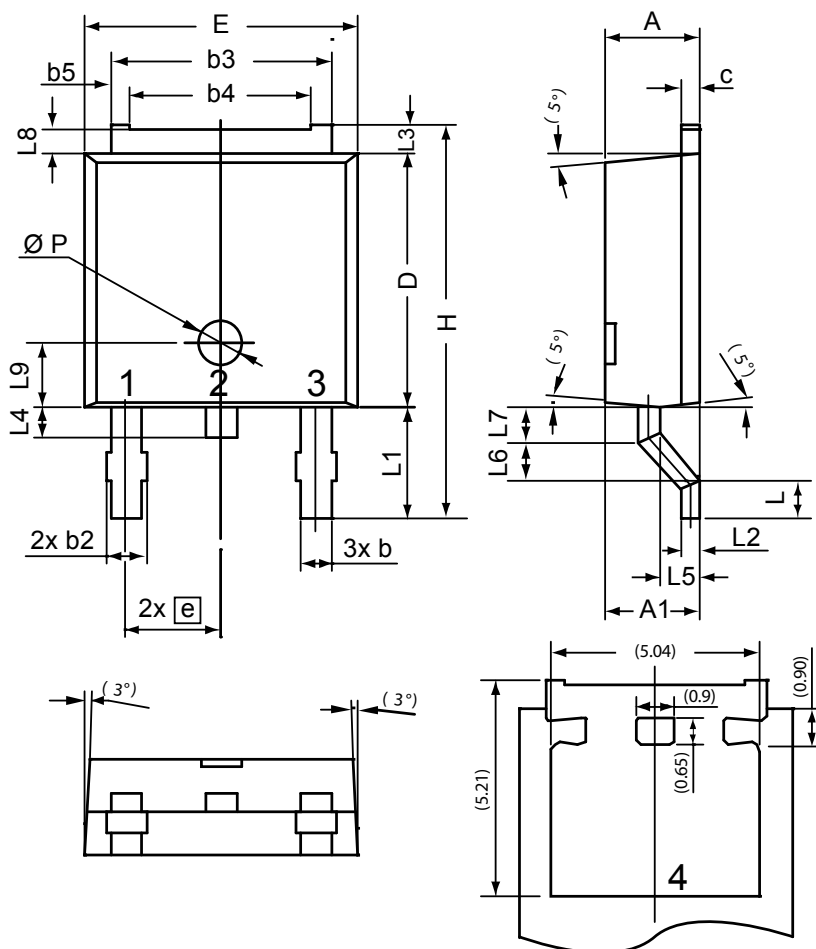
Symbol	Definition	Conditions	min.	typ.	max.	Unit
V_{RRM}	max. repetitive reverse voltage	$T_{VJ} = 25^{\circ}\text{C}$			25	V
I_R	reverse current	$V_R = 25\text{ V}$ $T_{VJ} = 25^{\circ}\text{C}$			6	mA
		$V_R = 25\text{ V}$ $T_{VJ} = 100^{\circ}\text{C}$			40	mA
V_F	forward voltage	$I_F = 6\text{ A}$ $T_{VJ} = 25^{\circ}\text{C}$			0.40	V
		$I_F = 12\text{ A}$			0.47	V
		$I_F = 6\text{ A}$ $T_{VJ} = 125^{\circ}\text{C}$			0.30	V
		$I_F = 12\text{ A}$			0.40	V
I_{FAV}	average forward current	rectangular $d = 0.5$ $T_C = 140^{\circ}\text{C}$			6	A
V_{F0}	threshold voltage	$T_{VJ} = 150^{\circ}\text{C}$ for power loss calculation only			0.18	V
r_F	slope resistance				15.9	mΩ
R_{thJC}	thermal resistance junction to case				3.00	K/W
T_{VJ}	virtual junction temperature		-55		150	$^{\circ}\text{C}$
P_{tot}	total power dissipation	$T_C = 25^{\circ}\text{C}$			40	W
I_{FSM}	max. forward surge current	$t = 10\text{ ms}$ (50 Hz), sine $T_{VJ} = 45^{\circ}\text{C}$			80	A
C_J	junction capacitance	$V_R = 5\text{ V}$; $f = 1\text{ MHz}$ $T_{VJ} = 25^{\circ}\text{C}$		639		pF

Symbol	Definition	Conditions	Ratings			
			min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal ¹⁾			20	A
R_{thCH}	thermal resistance case to heatsink			0.50		K/W
T_{stg}	storage temperature		-55		150	°C
Weight				0.3		g
F_c	mounting force with clip		20		60	N

Product Marking



Ordering	Ordering Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	DSS6-0025BS	DSS6-0025BS	Tape & Reel	2500	499064

Outlines TO-252 (DPak)


Dim.	Millimeters		Inches	
	min	max	min	max
A	2.20	2.40	0.087	0.094
A1	2.10	2.50	0.083	0.098
b	0.66	0.86	0.026	0.034
b2	-	0.96	-	0.038
b3	5.04	5.64	0.198	0.222
b4	4.34 BSC		0.171 BSC	
b5	0.50 BSC		0.020 BSC	
c	0.40	0.60	0.016	0.024
D	5.90	6.30	0.232	0.248
E	6.40	6.80	0.252	0.268
e	2.10	2.50	0.083	0.098
H	9.20	9.80	0.362	0.386
L	0.55	1.02	0.022	0.040
L1	2.50	2.90	0.098	0.114
L2	0.40	0.60	0.016	0.024
L3	0.50	0.90	0.020	0.035
L4	0.60	1.00	0.024	0.039
L5	0.82	1.22	0.032	0.048
L6	0.79	0.99	0.031	0.039
L7	0.81	1.01	0.032	0.040
L8	0.40	0.80	0.016	0.031
L9	1.50 BSC		0.059 BSC	
Ø P	1.00 BSC		0.039 BSC	