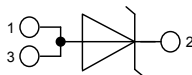


Schottky Diode

High Performance Schottky Diode
Low Loss and Soft Recovery
Single Diode

Part number

DSS6-015AS



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:

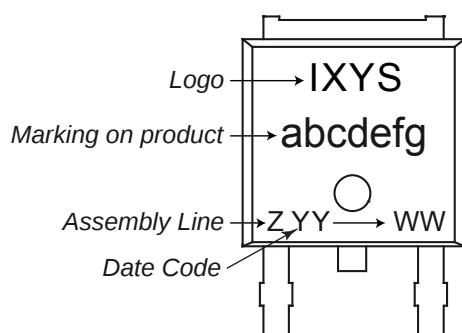
- Housing: TO-252 (DPak)
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Ratings

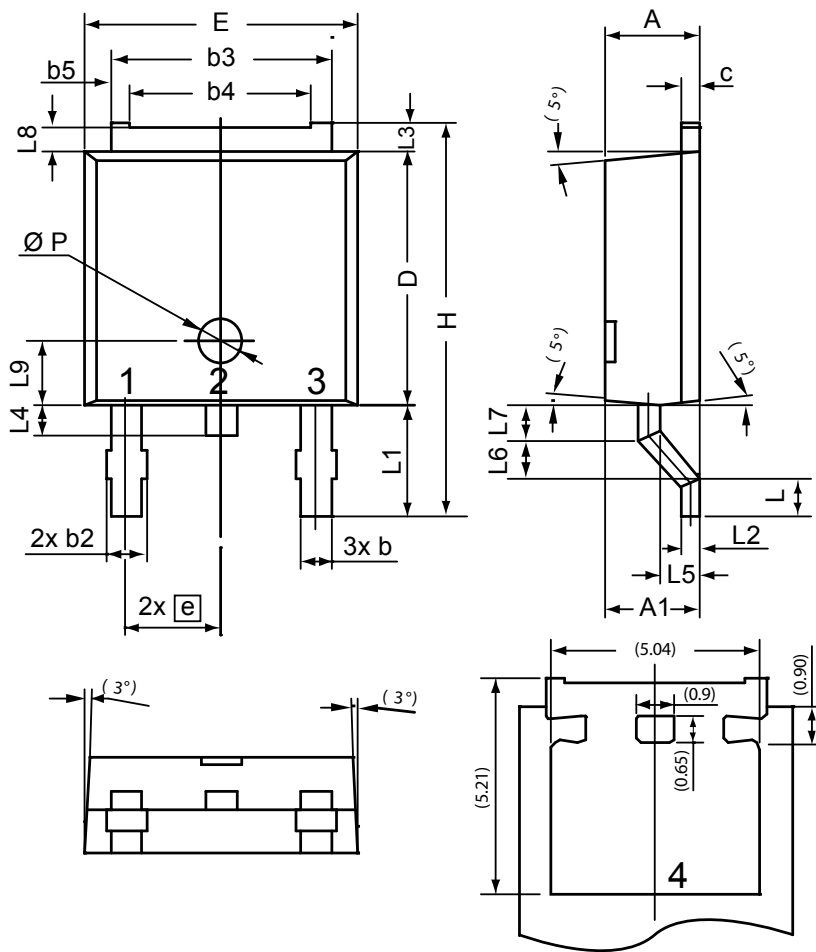
Symbol	Definition	Conditions			min.	typ.	max.	Unit
V _{RRM}	max. repetitive reverse voltage			T _{VJ} = 25 °C			150	V
I _R	reverse current	V _R = 150 V		T _{VJ} = 25 °C			0.3	mA
		V _R = 150 V		T _{VJ} = 125 °C			2.5	mA
V _F	forward voltage	I _F = 6 A		T _{VJ} = 25 °C			0.78	V
		I _F = 12 A					0.86	V
		I _F = 6 A		T _{VJ} = 125 °C			0.62	V
		I _F = 12 A					0.71	V
I _{FAV}	average forward current	rectangular	d = 0.5	T _C = 160 °C			6	A
V _{F0}	threshold voltage	} for power loss calculation only			T _{VJ} = 175 °C		0.45	V
r _F	slope resistance							14.6
R _{thJC}	thermal resistance junction to case						3.00	K/W
T _{VJ}	virtual junction temperature				-55		175	°C
P _{tot}	total power dissipation	T _C = 25 °C					50	W
I _{FSM}	max. forward surge current	t = 10 ms (50 Hz), sine			T _{VJ} = 45 °C		80	A
C _J	junction capacitance	V _R = 24 V; f = 1 MHz			T _{VJ} = 25 °C	82		pF

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
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	DSS6-015AS	DSS6-015AS	Tape & Reel	2500	498912

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	

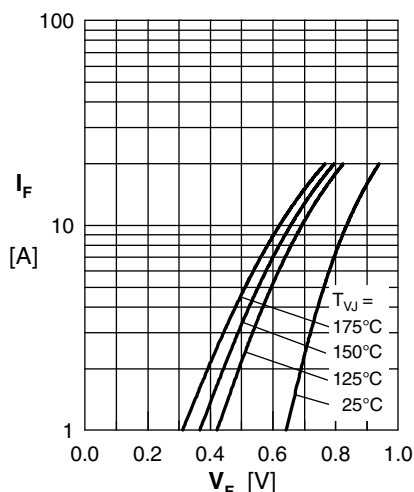


Fig. 1 Maximum forward voltage drop characteristics

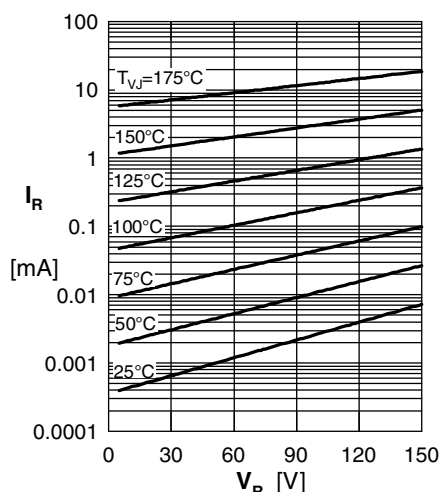


Fig. 2 Typ. reverse current I_R vs. reverse voltage V_R

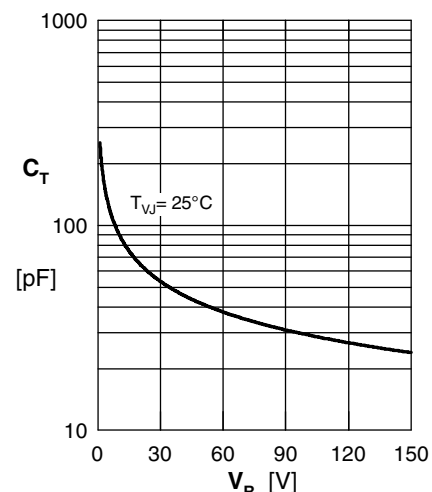


Fig. 3 Typ. junction capacitance C_T vs. reverse voltage V_R

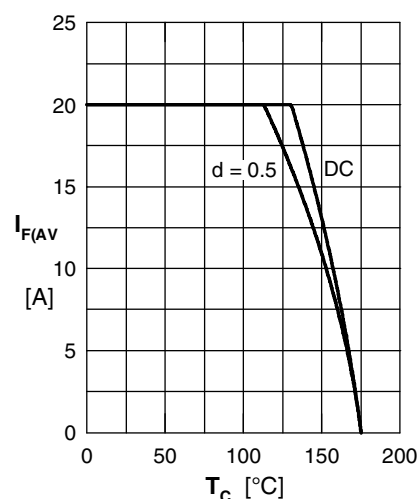


Fig. 4 Average forward current $I_{F(AV)}$ vs. case temperature T_C

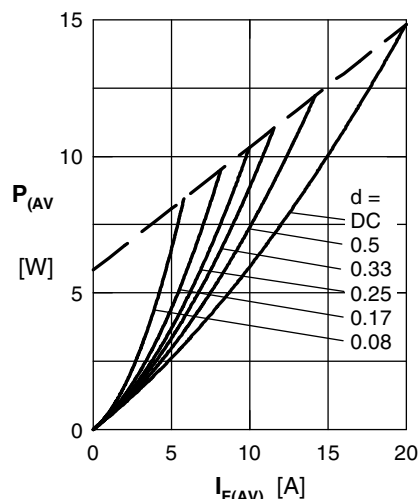


Fig. 5 Forward power loss characteristics

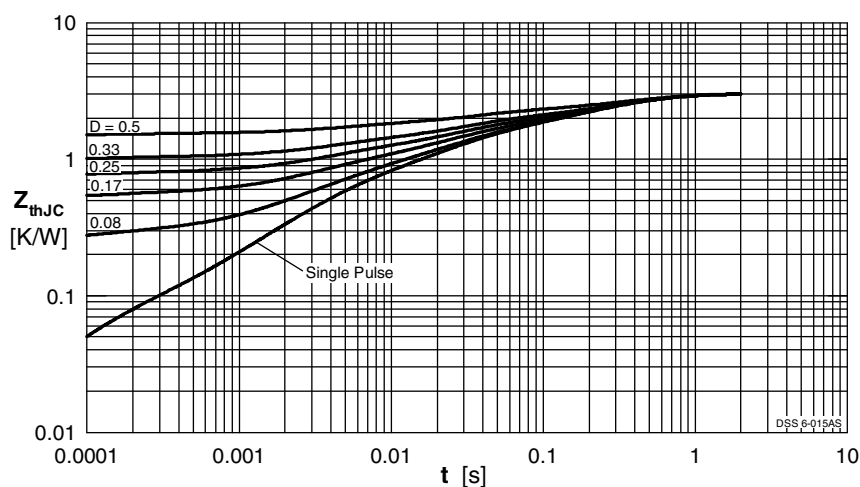


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode