

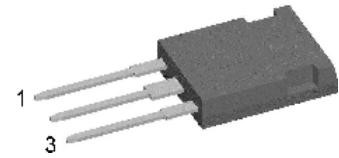
Schottky Diode

V_{RRM} = 2x 80 V
 I_{FAV} = 35 A
 V_F = 0,68 V

High Performance Schottky Diode
 Low Loss and Soft Recovery
 Phase leg

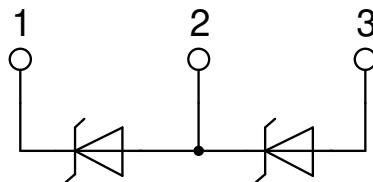
Part number

DSSS35-008AR



Backside: isolated

 E72873



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: ISOPLUS247

- Isolation Voltage: 3600 V~
- Industry standard outline
- RoHS compliant
- Epoxy meets UL 94V-0
- Soldering pins for PCB mounting
- Backside: DCB ceramic
- Reduced weight
- Advanced power cycling

Disclaimer Notice

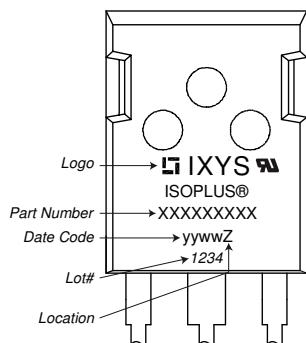
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Symbol	Definition	Conditions	Ratings			
			min.	typ.	max.	
V_{RSM}	max. non-repetitive reverse blocking voltage	$T_{VJ} = 25^\circ C$			80	V
V_{RRM}	max. repetitive reverse blocking voltage	$T_{VJ} = 25^\circ C$			80	V
I_R	reverse current, drain current	$V_R = 80 V$ $V_R = 80 V$	$T_{VJ} = 25^\circ C$ $T_{VJ} = 125^\circ C$		4 10	mA
V_F	forward voltage drop	$I_F = 35 A$ $I_F = 70 A$ $I_F = 35 A$ $I_F = 70 A$	$T_{VJ} = 25^\circ C$ $T_{VJ} = 125^\circ C$		0,79 0,95 0,68 0,86	V
I_{FAV}	average forward current	$T_C = 150^\circ C$ rectangular $d = 0.5$	$T_{VJ} = 175^\circ C$		35	A
V_{F0} r_F	threshold voltage slope resistance } for power loss calculation only		$T_{VJ} = 175^\circ C$		0,43 4,3	V mΩ
R_{thJC}	thermal resistance junction to case				0,8	K/W
R_{thCH}	thermal resistance case to heatsink			0,25		K/W
P_{tot}	total power dissipation		$T_C = 25^\circ C$		190	W
I_{FSM}	max. forward surge current	$t = 10 \text{ ms}; (50 \text{ Hz}), \text{sine}; V_R = 0 V$	$T_{VJ} = 45^\circ C$		600	A
C_J	junction capacitance	$V_R = 12V$ f = 1 MHz	$T_{VJ} = 25^\circ C$		1,05	nF

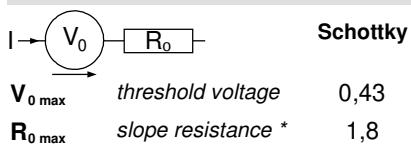
Package ISOPLUS247

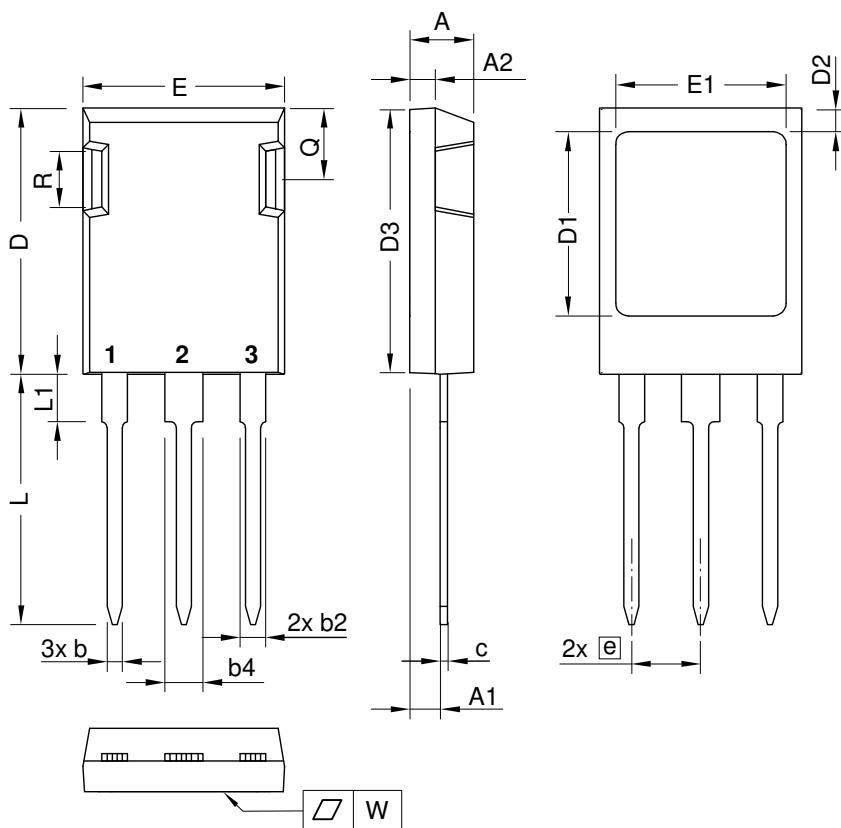
Symbol	Definition	Conditions	min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal			70	A
T_{VJ}	virtual junction temperature		-55		175	°C
T_{op}	operation temperature		-55		150	°C
T_{stg}	storage temperature		-55		150	°C
Weight				6		g
F_c	mounting force with clip		20		120	N
$d_{Spp/App}$	creepage distance on surface / striking distance through air	terminal to terminal	2,7			mm
$d_{Spb/Apb}$		terminal to backside	4,1			mm
V_{ISOL}	isolation voltage	$t = 1 \text{ second}$ $t = 1 \text{ minute}$ 50/60 Hz, RMS; $I_{ISOL} \leq 1 \text{ mA}$	3600 3000			V

Product Marking


Ordering	Ordering Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	DSSS35-008AR	DSSS35-008AR	Tube	30	499315

Similar Part	Package	Voltage class
DSSS30-01AR	ISOPLUS247 (3)	100

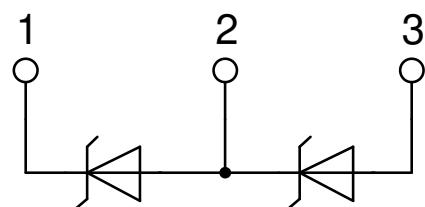
Equivalent Circuits for Simulation
* on die level
 $T_{VJ} = 175^\circ\text{C}$


Outlines ISOPLUS247


Dim.	Millimeter		Inches	
	min	max	min	max
A	4.83	5.21	0.190	0.205
A1	2.29	2.54	0.090	0.100
A2	1.91	2.16	0.075	0.085
b	1.14	1.40	0.045	0.055
b2	1.91	2.20	0.075	0.087
b4	2.92	3.24	0.115	0.128
c	0.61	0.83	0.024	0.033
D	20.80	21.34	0.819	0.840
D1	15.75	16.26	0.620	0.640
D2	1.65	2.15	0.065	0.085
D3	20.30	20.70	0.799	0.815
E	15.75	16.13	0.620	0.635
E1	13.21	13.72	0.520	0.540
e	5.45	BSC	0.215	BSC
L	19.81	20.60	0.780	0.811
L1	3.81	4.38	0.150	0.172
Q	5.59	6.20	0.220	0.244
R	4.25	5.50	0.167	0.217
W	-	0.10	-	0.004

Die konvexe Form des Substrates ist typ. < 0.04 mm über der Kunststoffoberfläche der Bauteilunterseite
The convex bow of substrate is typ. < 0.04 mm over plastic surface level of device bottom side

Die Gehäuseabmessungen entsprechen dem Typ TO-247 AD gemäß JEDEC außer Schraubloch und L_{\max} .
This drawing will meet all dimensions requirement of JEDEC outline TO-247 AD except screw hole and except L_{\max} .



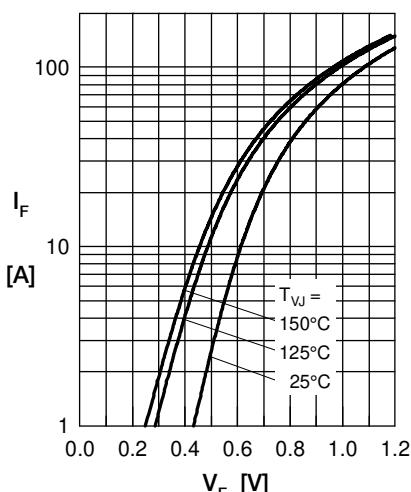
Schottky


Fig. 1 Max. forward voltage drop characteristics

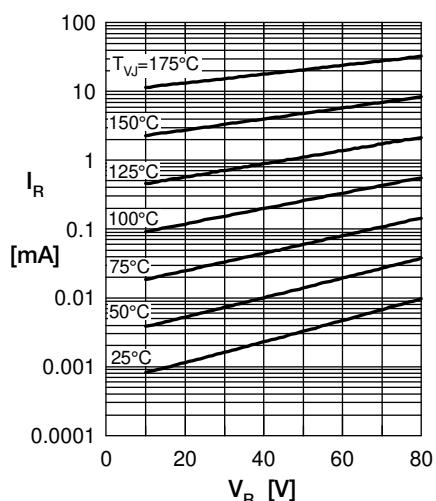


Fig. 2 Typ. reverse current I_R vs. reverse voltage V_R

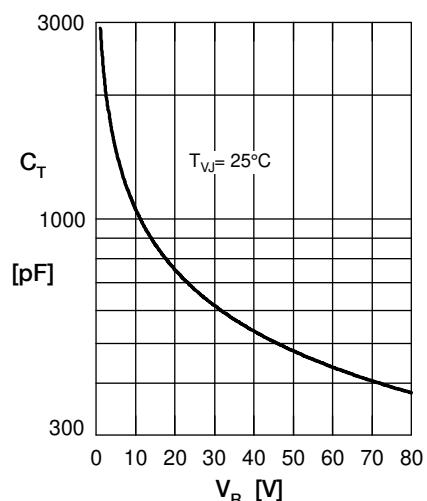


Fig. 3 Typ. junction capacitance C_T vs. reverse voltage V_R

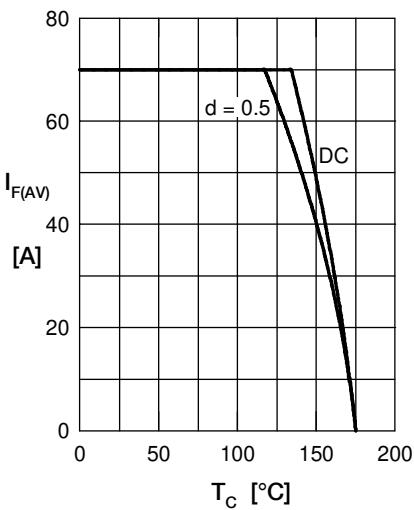


Fig. 4 Average forward current $I_{F(AV)}$ vs. case temp. T_C

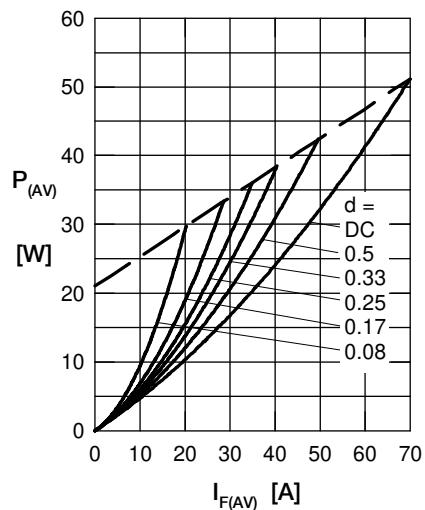


Fig. 5 Forward power loss characteristics

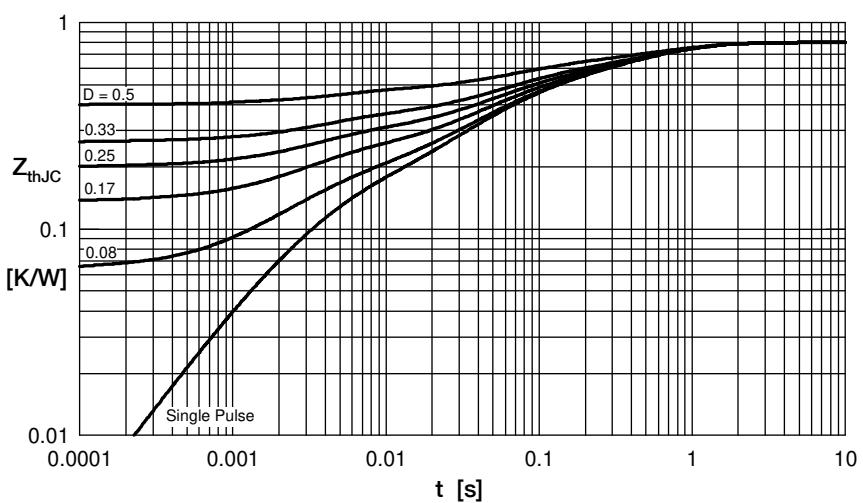


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode