

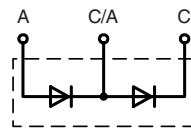
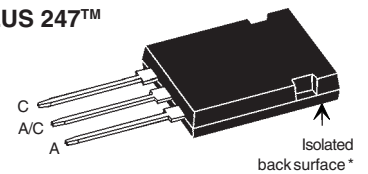
Power Schottky Rectifier dual diode

$$I_{FAV} = 2 \times 30 \text{ A}$$

$$V_{RRM} = 100 \text{ V}$$

$$V_F = 0.63 \text{ V}$$

V_{RSM}	V_{RRM}	Type
V	V	
100	100	DSSS 30-01AR


ISOPLUS 247™


C = Cathode, A = Anode

Symbol	Conditions	Maximum Ratings	
I_{FRMS}		70	A
I_{FAV}	$T_C = 155^\circ\text{C}$; rectangular, $d = 0.5$	30	A
I_{FAV}	$T_C = 155^\circ\text{C}$; rectangular, $d = 0.5$; per device	60	A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t_p = 10 \text{ ms}$ (50 Hz), sine	600	A
E_{AS}	$I_{AS} = 15 \text{ A}$; $L = 100 \mu\text{H}$; $T_{VJ} = 25^\circ\text{C}$; non repetitive	11.3	mJ
I_{AR}	$V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$; repetitive	1.5	A
$(dv/dt)_{cr}$		5000	V/ μs
T_{VJ}		-55...+175	$^\circ\text{C}$
T_{VJM}		175	$^\circ\text{C}$
T_{stg}		-55...+150	$^\circ\text{C}$
P_{tot}	$T_C = 25^\circ\text{C}$	190	W
F_C	mounting force with clip	20...120	N
V_{ISOL}	50/60 Hz, RMS; $t = 1 \text{ s}$	3000	V~
Weight	typical	6	g

Features

- International standard package
- Very low V_F
- Extremely low switching losses
- Low I_{RM} -values
- Isolated and UL registered E153432

Applications

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters

Advantages

- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching
- Low losses

Dimensions see Outlines.pdf

Symbol	Conditions	Characteristic Values	
		typ.	max.
I_R ①	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$ $V_R = V_{RRM}$; $T_{VJ} = 125^\circ\text{C}$	2	mA
		20	mA
V_F	$I_F = 30 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$ $I_F = 30 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ $I_F = 60 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$	0.63	V
		0.79	V
		0.78	V
R_{thJC}		0.8	K/W
R_{thCH}	0.25		K/W

Pulse test: ① Pulse Width = 5 ms, Duty Cycle < 2.0%
Data according to IEC 60747 and per diode unless otherwise specified

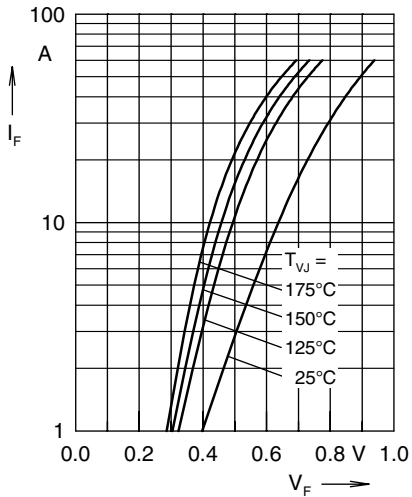


Fig. 1 Max. forward voltage drop characteristics

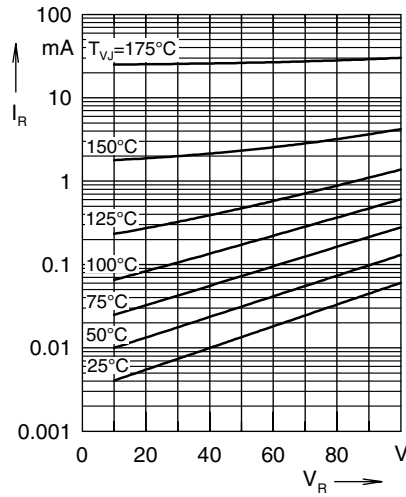


Fig. 2 Typ. reverse current I_R versus reverse voltage

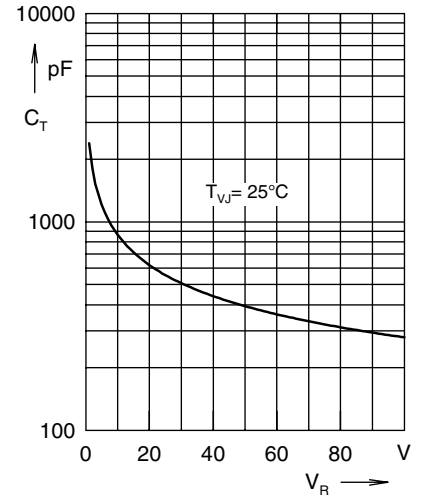


Fig. 3 Typ. junction capacitance C_T vs. reverse voltage V_R

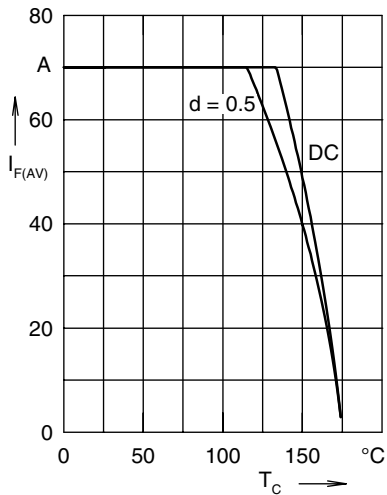


Fig. 4 Avg. forward current $I_{F(AV)}$ vs. case temperature T_C

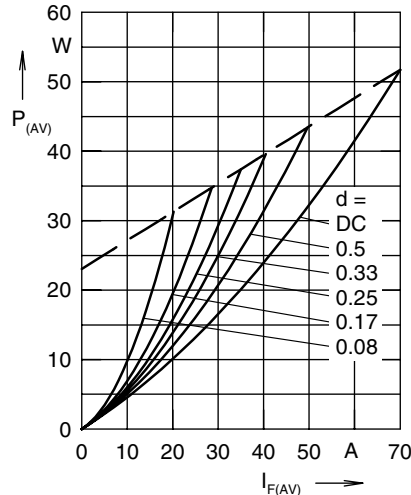


Fig. 5 Forward power loss characteristics

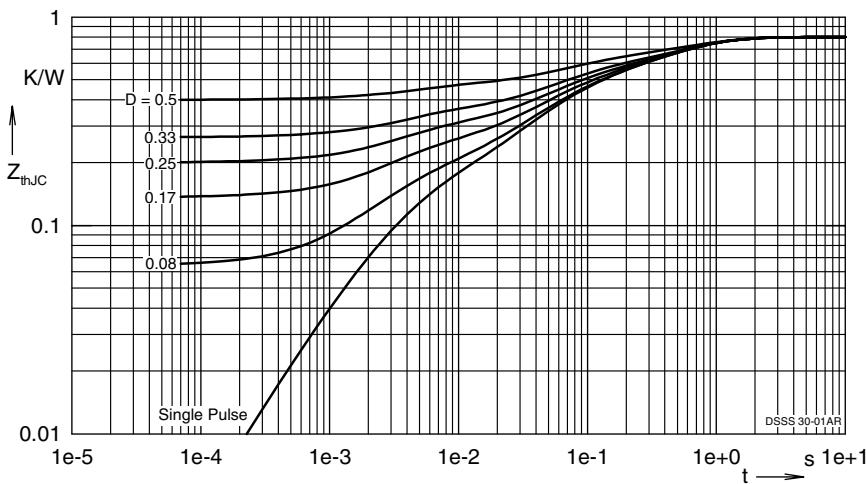


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode