

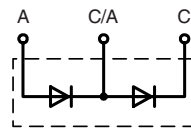
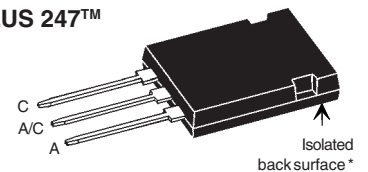
# Power Schottky Rectifier dual diode

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

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

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

$V_{RSM}$	$V_{RRM}$	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/ $\mu\text{s}$
$T_{VJ}$		-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	$V_R = V_{RRM}$ ; $T_{VJ} = 25^\circ\text{C}$		2 mA
	$V_R = V_{RRM}$ ; $T_{VJ} = 125^\circ\text{C}$		20 mA
$V_F$	$I_F = 30 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$		0.63 V
	$I_F = 30 \text{ A}$ ; $T_{VJ} = 25^\circ\text{C}$		0.79 V
	$I_F = 60 \text{ A}$ ; $T_{VJ} = 125^\circ\text{C}$		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

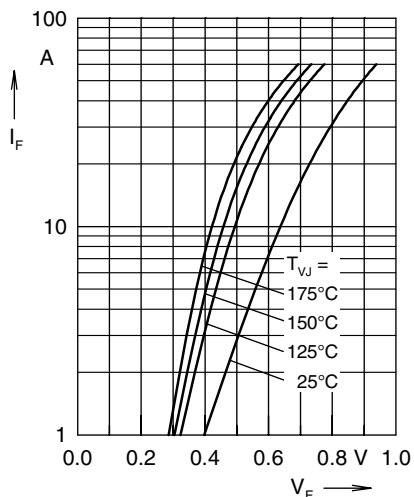


Fig. 1 Max. forward voltage drop characteristics

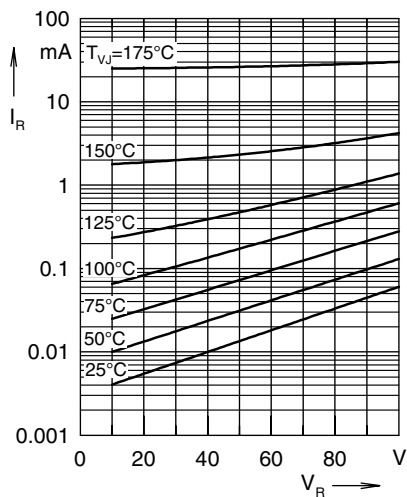


Fig. 2 Typ. reverse current  $I_R$  versus reverse voltage

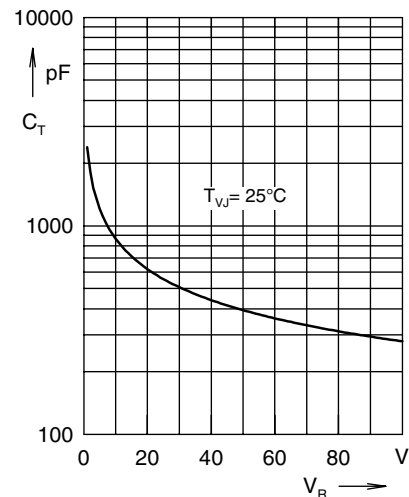


Fig. 3 Typ. junction capacitance  $C_T$  vs. reverse voltage  $V_R$

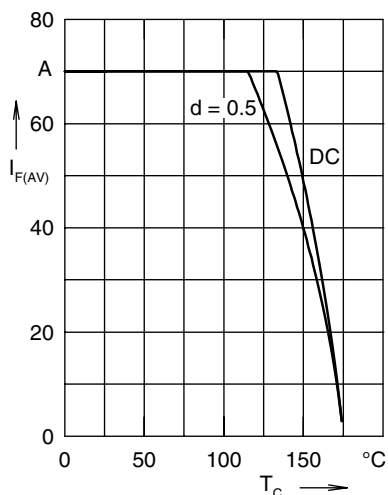


Fig. 4 Avg. forward current  $I_{F(AV)}$  vs. case temperature  $T_C$

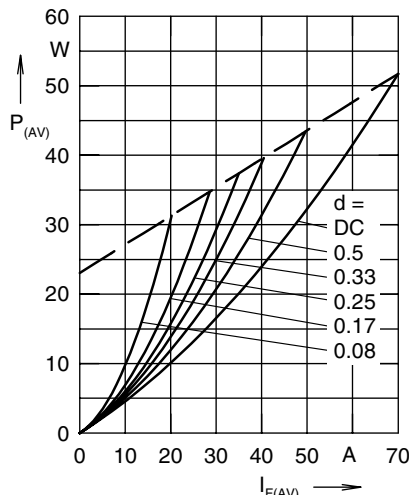


Fig. 5 Forward power loss characteristics

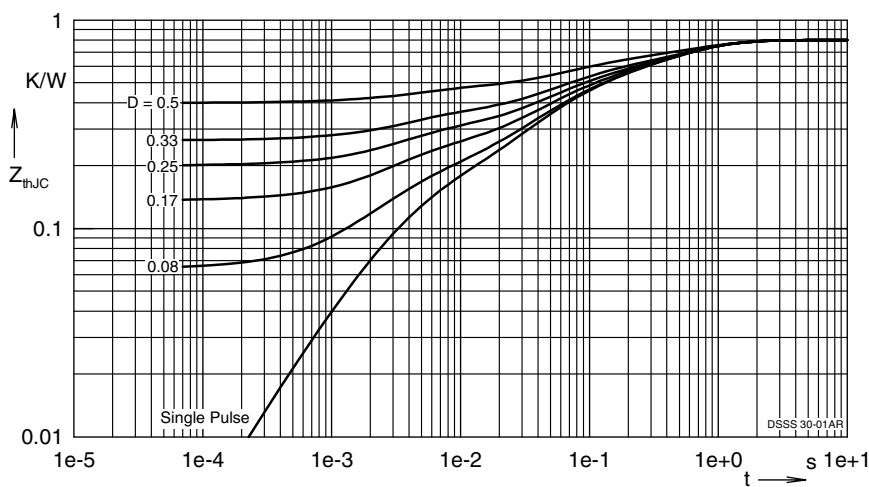


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode

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