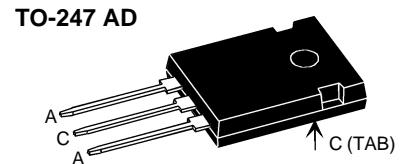
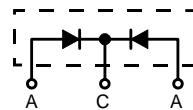


## Power Schottky Rectifier with common cathode

**I<sub>FAV</sub> = 2x15 A**  
**V<sub>RRM</sub> = 45 V**  
**V<sub>F</sub> = 0.57 V**

V <sub>RSM</sub> V	V <sub>RRM</sub> V	Type
45	45	DSSK 30-0045A



A = Anode, C = Cathode , TAB = Cathode

Symbol	Conditions	Maximum Ratings	
I <sub>FRMS</sub>		50	A
I <sub>FAV</sub>	T <sub>C</sub> = 160°C; rectangular, d = 0.5	15	A
I <sub>FAV</sub>	T <sub>C</sub> = 160°C; rectangular, d = 0.5; per device	30	A
I <sub>FSM</sub>	T <sub>VJ</sub> = 45°C; t <sub>p</sub> = 10 ms (50 Hz), sine	280	A
E <sub>AS</sub>	I <sub>AS</sub> = 15 A; L = 180 µH; T <sub>VJ</sub> = 25°C; non repetitive	32	mJ
I <sub>AR</sub>	V <sub>A</sub> = 1.5 • V <sub>RRM</sub> typ.; f=10 kHz; repetitive	1.5	A
(dv/dt) <sub>cr</sub>		1000	V/µs
T <sub>VJ</sub>		-55...+175	°C
T <sub>VJM</sub>		175	°C
T <sub>stg</sub>		-55...+150	°C
P <sub>tot</sub>	T <sub>C</sub> = 25°C	105	W
M <sub>d</sub>	mounting torque	0.8...1.2	Nm
Weight	typical	6	g

Symbol	Conditions	Characteristic Values	
		typ.	max.
I <sub>R</sub> ①	T <sub>VJ</sub> = 25°C V <sub>R</sub> = V <sub>RRM</sub> T <sub>VJ</sub> = 125°C V <sub>R</sub> = V <sub>RRM</sub>	0.5 5	mA mA
V <sub>F</sub>	I <sub>F</sub> = 15 A; T <sub>VJ</sub> = 125°C I <sub>F</sub> = 15 A; T <sub>VJ</sub> = 25°C I <sub>F</sub> = 30 A; T <sub>VJ</sub> = 125°C	0.57 0.66 0.67	V V V
R <sub>thJC</sub>		1.4	K/W
R <sub>thCH</sub>		0.25	K/W

### Features

- International standard package
- Very low V<sub>F</sub>
- Extremely low switching losses
- Low I<sub>RM</sub>-values
- Epoxy meets UL 94V-0

### 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

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

IXYS reserves the right to change limits, Conditions and dimensions.

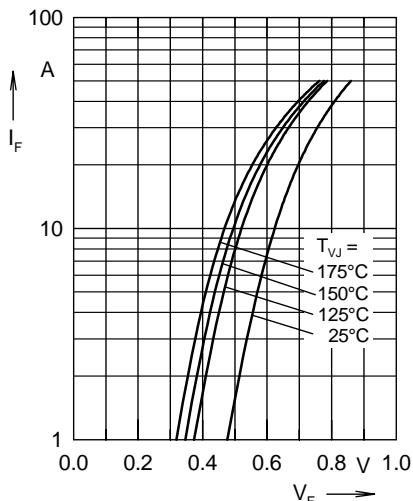


Fig. 1 Maximum forward voltage drop characteristics

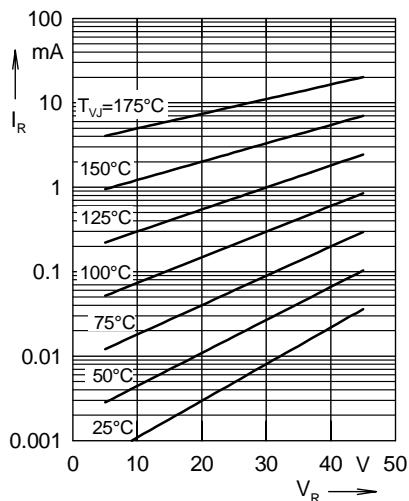


Fig. 2 Typ. value of reverse current  $I_R$  versus reverse voltage  $V_R$

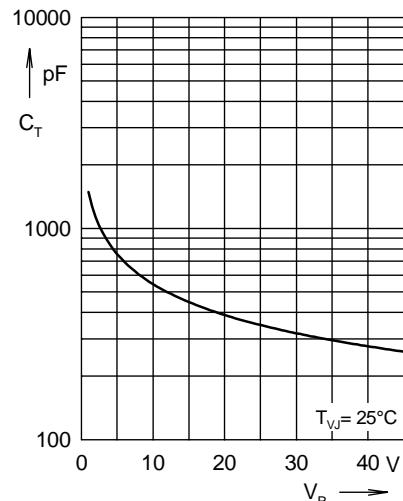


Fig. 3 Typ. junction capacitance  $C_T$  versus reverse voltage  $V_R$

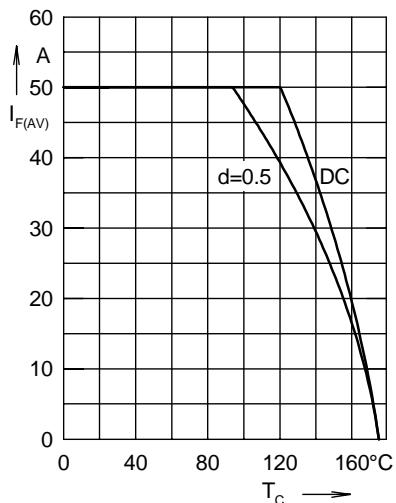


Fig. 4 Average forward current  $I_{F(AV)}$  versus case temperature  $T_C$

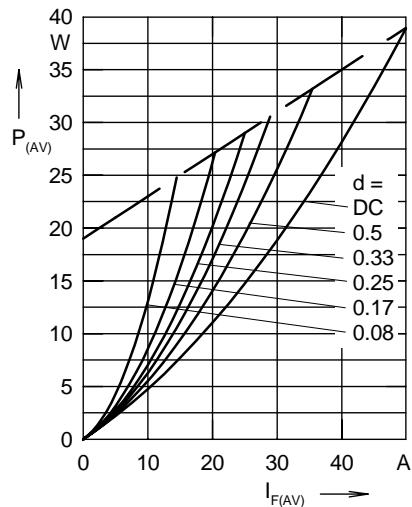


Fig. 5 Forward power loss characteristics

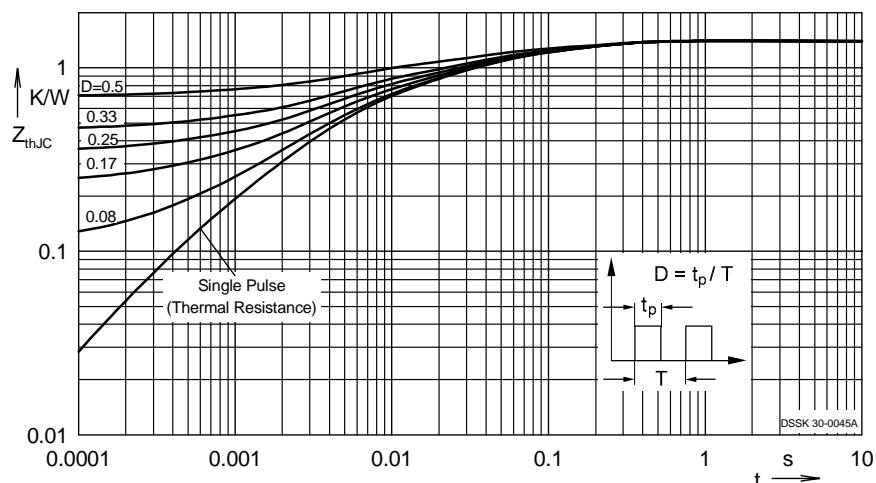


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode