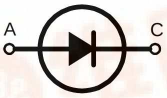
IXYS

DSS 16-01A
DSS 16-01AS

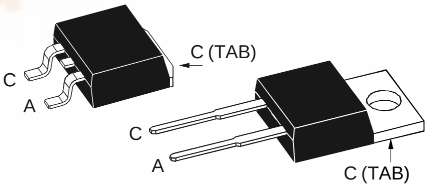
Power Schottky Rectifier

I_{FAV} = 16 A
V_{RRM} = 100 V
V_F = 0.64 V

V_{RSM} V	V_{RRM} V	Type	
100	100	DSS 16-01A	DSS 16-01AS



TO-263 AB (AS-Type) **TO-220 AC** (A-Type)



A = Anode, C = Cathode , TAB = Cathode

Symbol	Conditions	Maximum Ratings	
I_{FRMS} I_{FAV}	T_C = 155°C; rectangular, d = 0.5	35 16	A A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sinev	230	A
E_{AS}	I_{AS} = 9.5 A; L = 180 µH; T_{VJ} = 25°C; non repetitive	10	mJ
I_{AR}	V_A =1.5 • V_{RRM} typ.; f=10 kHz; repetitive	1	A
$(dv/dt)_{cr}$		5000	V/µs
T_{VJ} T_{VJM} T_{stg}		-55...+175 175 -55...+150	°C °C °C
P_{tot}	T_C = 25°C	105	W
M_d	mounting torque (A-Type only)	0.4...0.6	Nm
Weight	typical	2	g

Symbol	Conditions	Characteristic Values typ.	max.	
I_R ①	T_{VJ} = 25°C V_R = V_{RRM} T_{VJ} = 125°C V_R = V_{RRM}		0.5 5	mA mA
V_F	I_F = 15 A; T_{VJ} = 125°C I_F = 15 A; T_{VJ} = 25°C I_F = 30 A; T_{VJ} = 125 °C		0.64 0.79 0.76	V V V
R_{thJC} R_{thCH}		 0.5	1.4 	K/W K/W

Features

- International standard package
- Very low V_F
- Extremely low switching losses
- Low I_{RM}-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

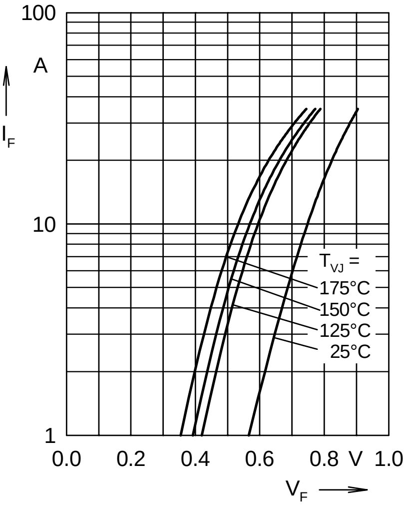


Fig. 1 Maximum forward voltage drop characteristics

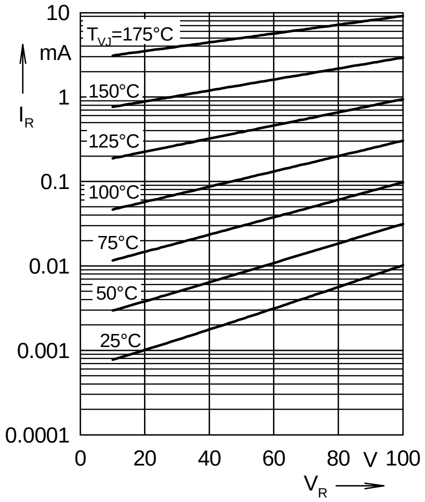


Fig. 2 Typ. value of reverse current I_R versus reverse voltage V_R

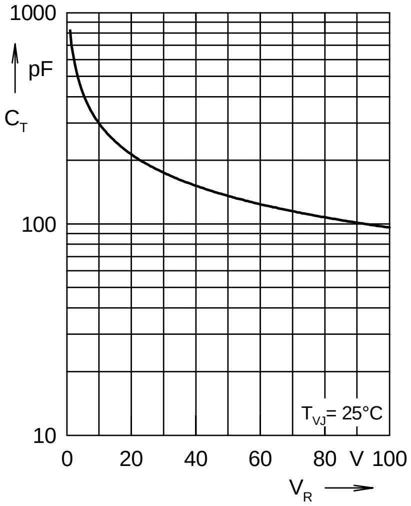


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

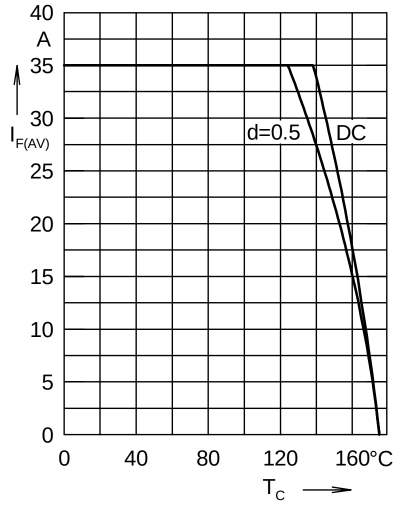


Fig. 4 Average forward current $I_{F(AV)}$ versus case temperature T_C

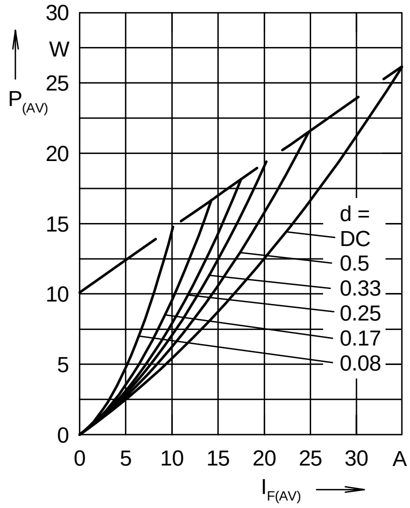


Fig. 5 Forward power loss characteristics

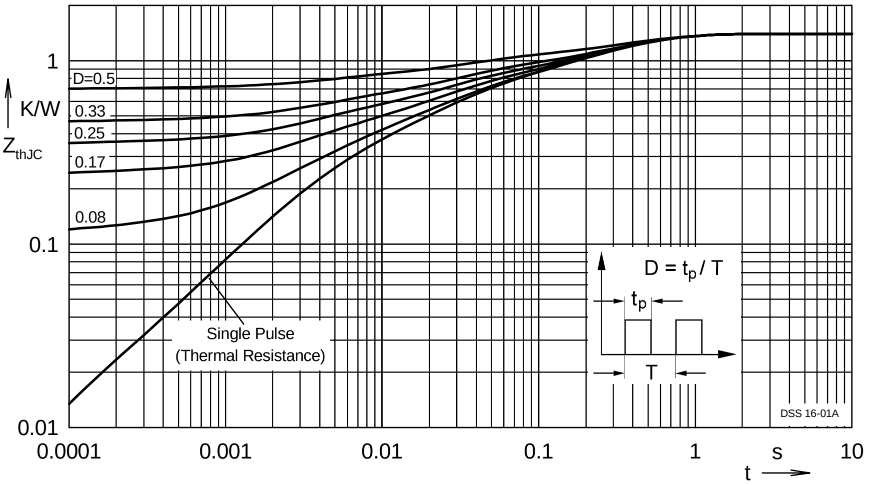


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode