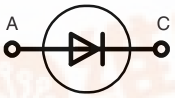
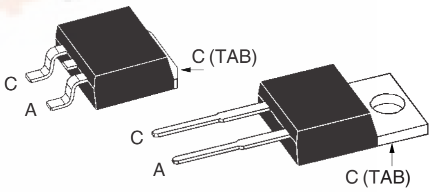
Power Schottky Rectifier

I_{FAV} = 10 A
V_{RRM} = 100 V
V_F = 0.66 V

V_{RSM} V	V_{RRM} V	Type	
100	100	DSS 10-01A	DSS 10-01AS



TO-263 AB (...S-Type) **TO-220 AC**



A = Anode, C = Cathode , TAB = Cathode

Symbol	Conditions	Maximum Ratings	
I_{FRMS} I_{FAV}	 T_C = 160°C; rectangular, d = 0.5	35 10	A A
I_{FSM}	T_{VJ} = 45°C; t_p = 10 ms (50 Hz), sine	120	A
E_{AS}	I_{AS} = 5 A; L = 100 µH; T_{VJ} = 25°C; non repetitive	1.3	mJ
I_{AR}	V_A =1.5 • V_{RRM} typ.; f=10 kHz; repetitive	0.8	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	90	W
M_d	mounting torque (A-Type only)	0.4...0.6	Nm
Weight	typical	2	g

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

Symbol	Conditions	Characteristic Values typ.	max.	
I_R ①	V_R = V_{RRM}; T_{VJ} = 25°C V_R = V_{RRM}; T_{VJ} = 125°C		0.3 2.5	mA mA
V_F	I_F = 10 A; T_{VJ} = 125°C I_F = 10 A; T_{VJ} = 25°C I_F = 20 A; T_{VJ} = 125°C		0.66 0.84 0.80	V V V
R_{thJC} R_{thCH}		 0.5	1.7	K/W K/W

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

Dimensions see Outlines.pdf

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

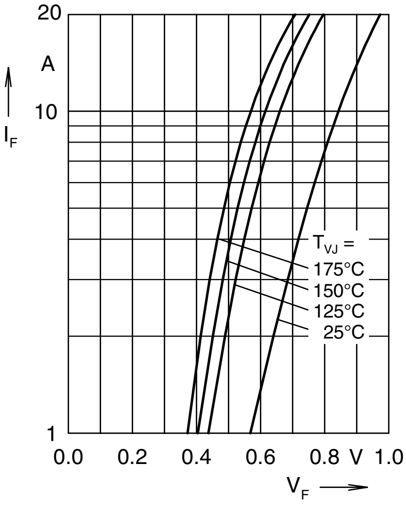


Fig. 1 Maximum forward voltage drop characteristics

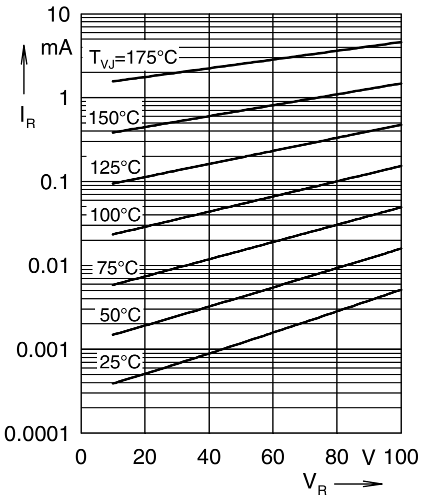


Fig. 2 Typ. reverse current I_R vs: reverse voltage V_R

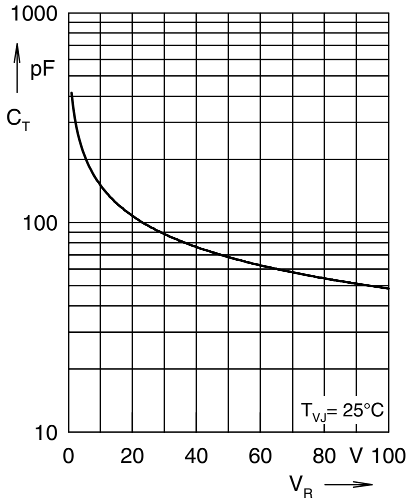


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

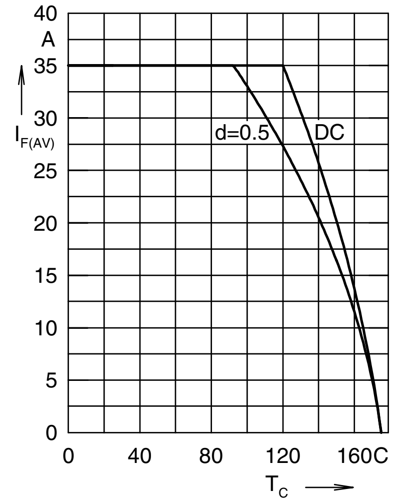


Fig. 4 Avg: forward current $I_{F(AV)}$ vs: case temperature T_C

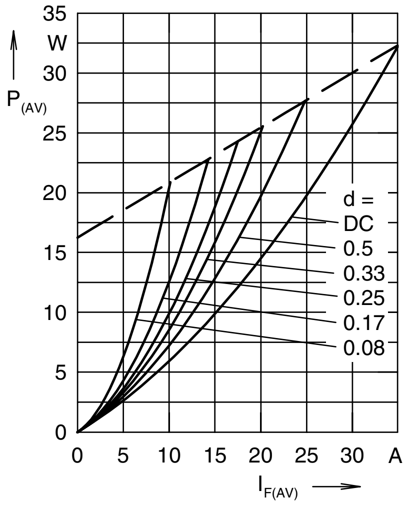
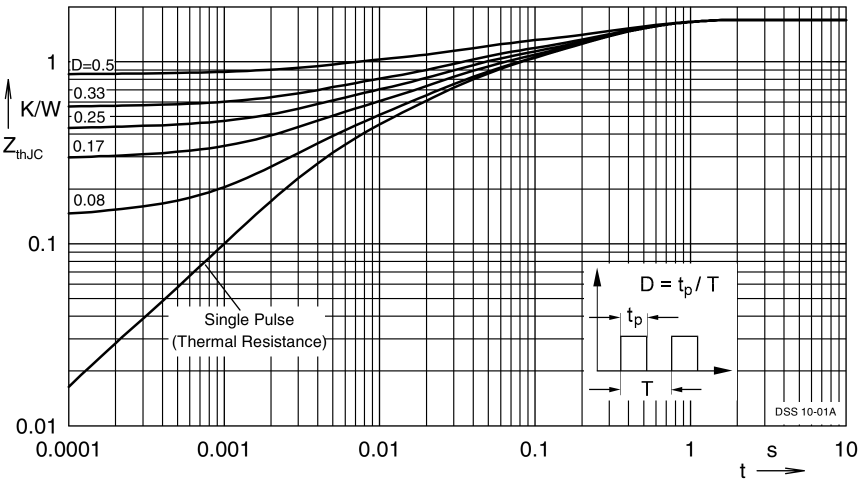


Fig. 5 Forward power loss characteristics



Note: All curves are per diode

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