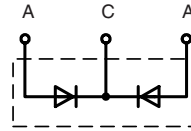


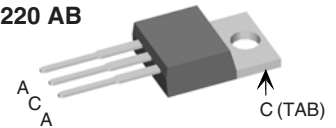
Power Schottky Rectifier with common cathode

$$\begin{aligned} I_{FAV} &= 2 \times 10 \text{ A} \\ V_{RRM} &= 45 \text{ V} \\ V_F &= 0.56 \text{ V} \end{aligned}$$

V_{RSM}	V_{RRM}	Type
V	V	
45	45	DSSK 20-0045A



TO-220 AB



A = Anode, C = Cathode, TAB = Cathode

Symbol	Conditions	Maximum Ratings		Features
I_{FRMS}		35	A	• International standard package • Very low V_F • Extremely low switching losses • Low I_{RM}-values • Epoxy meets UL 94V-0
I_{FAV}	$T_C = 160^\circ\text{C}$; rectangular, $d = 0.5$	10	A	
I_{FAV}	$T_C = 160^\circ\text{C}$; rectangular, $d = 0.5$; per device	20	A	
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t_p = 10 \text{ ms}$ (50 Hz), sine	140	A	
E_{AS}	$I_{AS} = 13 \text{ A}$; $L = 180 \mu\text{H}$; $T_{VJ} = 25^\circ\text{C}$; non repetitive	24	mJ	
I_{AR}	$V_A = 1.5 \cdot V_{RRM}$ typ.; $f = 10 \text{ kHz}$; repetitive	1.3	A	Applications • Rectifiers in switch mode power supplies (SMPS) • Free wheeling diode in low voltage converters
$(dv/dt)_{cr}$		1000	V/ μs	
T_{VJ}		-55...+175	$^\circ\text{C}$	
T_{VJM}		175	$^\circ\text{C}$	
T_{stg}		-55...+150	$^\circ\text{C}$	
P_{tot}	$T_C = 25^\circ\text{C}$	90	W	Advantages • High reliability circuit operation • Low voltage peaks for reduced protection circuits • Low noise switching • Low losses
M_d	mounting torque	0.4...0.6	Nm	
Weight	typical	2	g	

Symbol	Conditions	Characteristic Values	
		typ.	max.
I_R ①	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$	0.3	mA
	$V_R = V_{RRM}$; $T_{VJ} = 125^\circ\text{C}$	2.5	mA
V_F	$I_F = 10 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$	0.56	V
	$I_F = 10 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$	0.68	V
	$I_F = 20 \text{ A}$; $T_{VJ} = 125^\circ\text{C}$	0.69	V
R_{thJC}		1.7	K/W
R_{thCH}	0.5		K/W

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

Recommended replacement:
DSA20C45PB/DSA30C45PB

Dimensions see Outlines.pdf

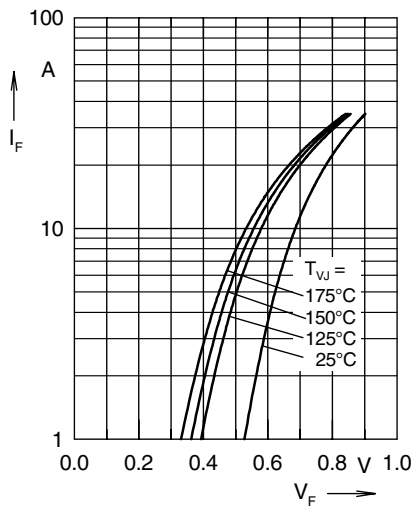


Fig. 1 Maximum forward voltage drop characteristics

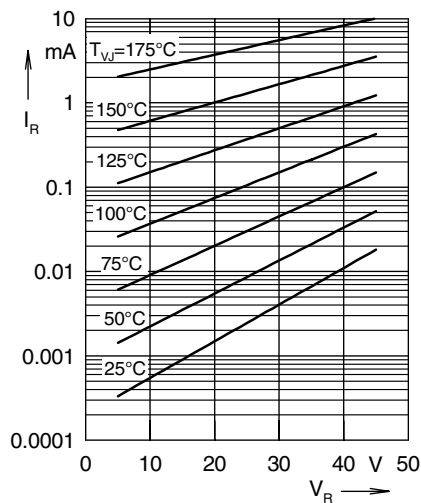


Fig. 2 Typ. value of reverse current I_R versus reverse voltage V_R

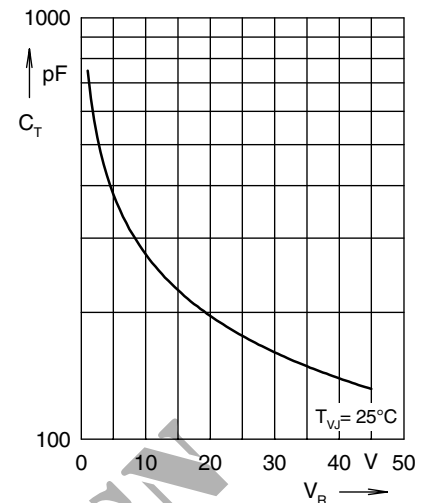


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

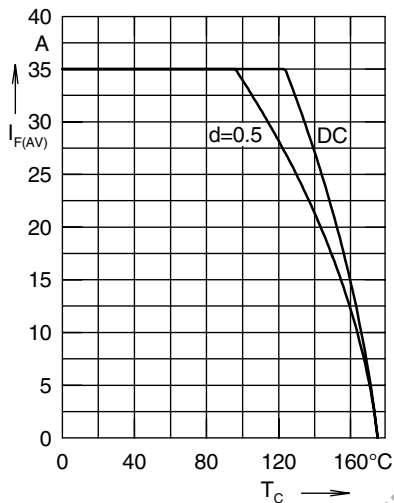


Fig. 4 Average forward current $I_{F(AV)}$ versus case temperature T_C

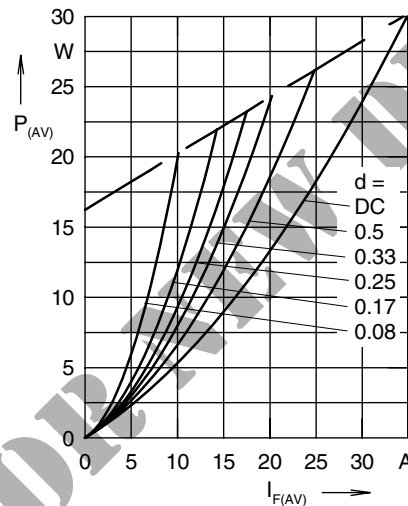


Fig. 5 Forward power loss characteristics

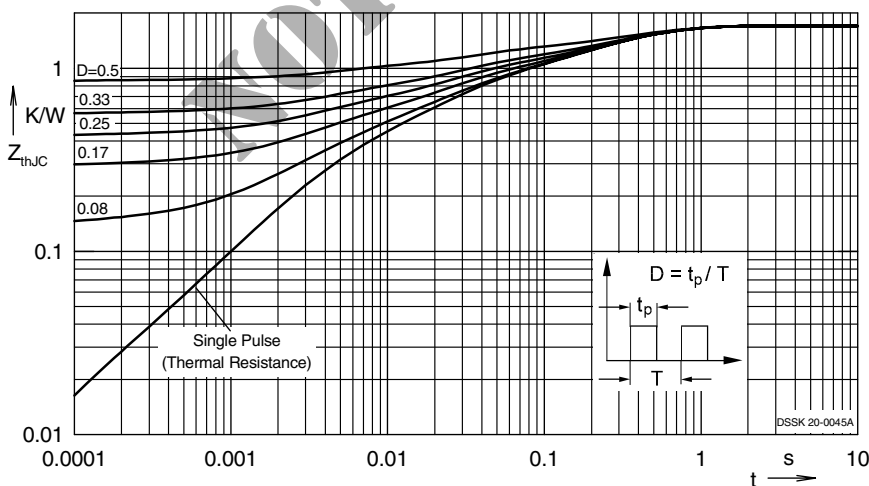


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Note: All curves are per diode

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

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