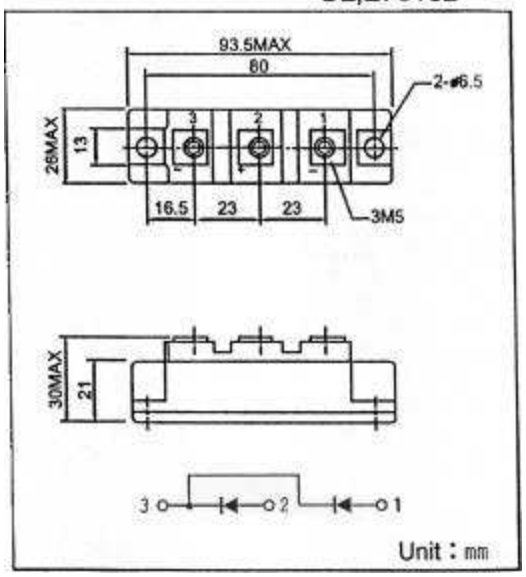
SanRex

ISOLATED DIODE MODULE (SOFT RECOVERY DIODE)

DKA300AA50/60 V_{RRM}=500/600V, I_{FAV}=150A, trr=230ns, Softness=0.8

SanRex Soft Recovery Diode Module **DKA300AA** is designed for applications requiring fast switching and soft recovery wave shape to reduce or eliminate the need for snubber components in the circuit. The modules are isolated for easy mounting with other components or a common heatsink.

UL;E76102



Features

* Very Fast Reverse Recovery Time
* Soft Recovery Characteristics
* Low Forward Voltage Drop
* UL registered E76102

Typical Applications

* Welding and Plasma Cutting Machines
* DC chopper
* Rectifier in Switch Mode Power Supplies (SMPS)
* Uninterruptible Power Supplies (UPS)
* Free Wheeling Diode in converters and motor control circuits

< Maximum Ratings > (Tj = 25°C unless otherwise specified)

Symbol	Item	Ratings		Unit
		DKA300AA50	DKA300AA60	
V_{RRM}	Repetitive Peak Reverse Voltage	500	600	V
$V_{R(DC)}$	Reverse D.C. Voltage	400	480	V

Symbol	Item		Conditions	Ratings	Unit
$I_{F(AV)}$	Average Forward Current		D.C., T_C = 72℃	150	A
I_{FSM}	Surge Forward Current		½ cycle, 60Hz, Peak value, non-repetitive	2500	A
I^2t	I^2t (for fusing)		Value for one cycle surge current	26000	A^2s
Tj	Junction Temperature			-40 to +150	℃
Tstg	Storage Temperature			-40 to +125	℃
V_{ISO}	Isolation Voltage (R.M.S.)		A.C. 1 minute	2500	V
	Mounting Torque	Mounting M6	Recommended 2.5-3.9 (25-40)	4.7(48)	N·m
		Terminal M5	Recommended 1.5-2.5 (15-25)	2.7(28)	(kgf·cm)
	Mass		Typical Value	170	g

< Electrical Characteristics > (Tj = 25°C unless otherwise specified)

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	$V_R = V_{RRM}$, Tj = 125℃			150	mA
V_{FM}	Forward Voltage Drop	I_F= 150A, Inst. Measurement		1.18	1.30	V
t_{rr}	Reverse Recovery Time	I_F= 150A, V_R=300V, -di / dt = 100A/μs		230	300	N s
t_b/t_a	Softness	I_F= 150A, V_R=300V, -di / dt = 100A/μs	0.80			
Rth(j-c)	Thermal Resistance	Junction to case, ½ module			0.40	℃/W

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