SanRex®

Soft Recovery Diode

DCA100AA50/60

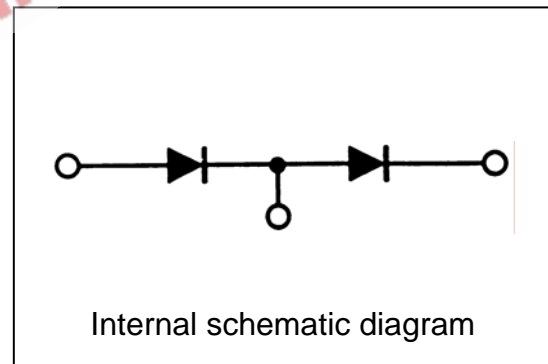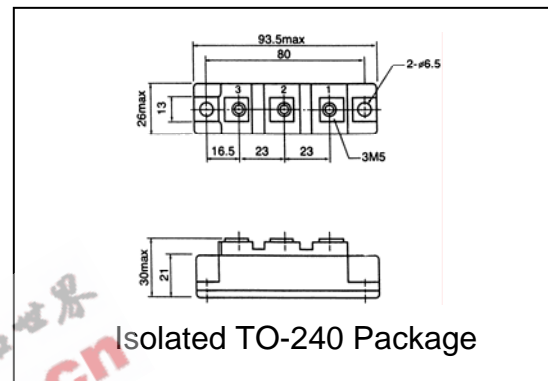$I_{F(AV)}$= 100A, V_{RRM}=600V
trr=220ns, Softness=0.8

SanRex Soft Recovery Diode Module **DCA100AA** series 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.

Isolated TO-240 Package

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

Internal schematic diagram

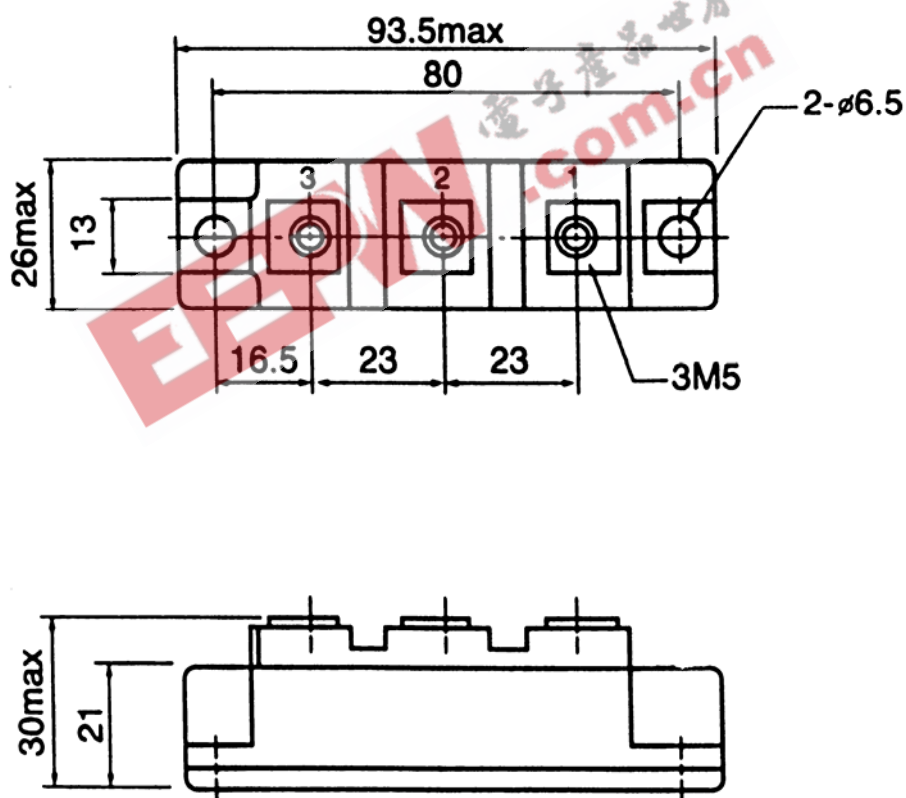< Maximum Ratings >   Tj = 25°C (unless otherwise noted) per diode

Symbol	Item		Ratings		Unit
			DCA100AA50	DCA100AA60	
V_{RRM}	Repetitive Peak Reverse Voltage		500	600	V
$V_{R(DC)}$	Reverse D.C. Voltage		400	480	V

$I_{F(AV)}$	Average Forward Current	D.C., T_C = 85°C		100	A
I_{FSM}	Surge Forward Current	½ cycle, 60Hz, Peak value, non-repetitive		2000	A
I^2t	I^2t (for fusing)	Value for one cycle surge current		16700	A^2s
T_j	Junction Temperature			-40 to +150	°C
T_{stg}	Storage Temperature			-40 to +125	°C
V_{ISO}	Isolation Voltage (R.M.S.)	A.C. 1 minute		2500	V
	Mounting Torque	Mounting M6	Recommended 2.5-3.9	4.7	N·m
		Terminal M5	Recommended 1.5-2.5	2.7	
	Mass	Typical Value		170	g

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< Electrical Characteristics >   Tj= 25°C (unless otherwise noted) per diode

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	$V_R = V_{RRM}$, Tj= 125°C			100	mA
V_{FM}	Forward Voltage Drop	I_F= 100A, Inst. measurement		1.18	1.30	V
t_{rr}	Reverse Recovery Time	I_F= 100A, V_R=300V, -di / dt = 100A/⊢s		220	300	n s
t_b/t_a	Softness	I_F= 100A, V_R=300V, -di / dt = 100A/⊢s	0.80			
$R_{th(j-c)}$	Thermal Resistance	Junction to case			0.5	°C/W

* Dimensions in millimeters