

Soft Recovery Diode

DCA150AA50/60

**$I_{F(AV)} = 150A$, $V_{RRM} = 600V$
 $t_{rr} = 230ns$, Softness=0.8**

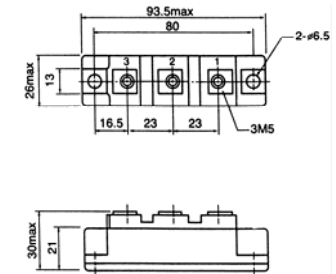
SanRex Soft Recovery Diode Module **DCA150AA** series is designed for applications requiring fast switching and soft recovery wave shape to reduce or eliminate the need for snubber components in the circuit. The modules are isolated for easy mounting with other components or a common heatsink.

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



Isolated TO-240 Package



Internal schematic diagram

< Maximum Ratings >

$T_j = 25^\circ C$ (unless otherwise noted) per diode

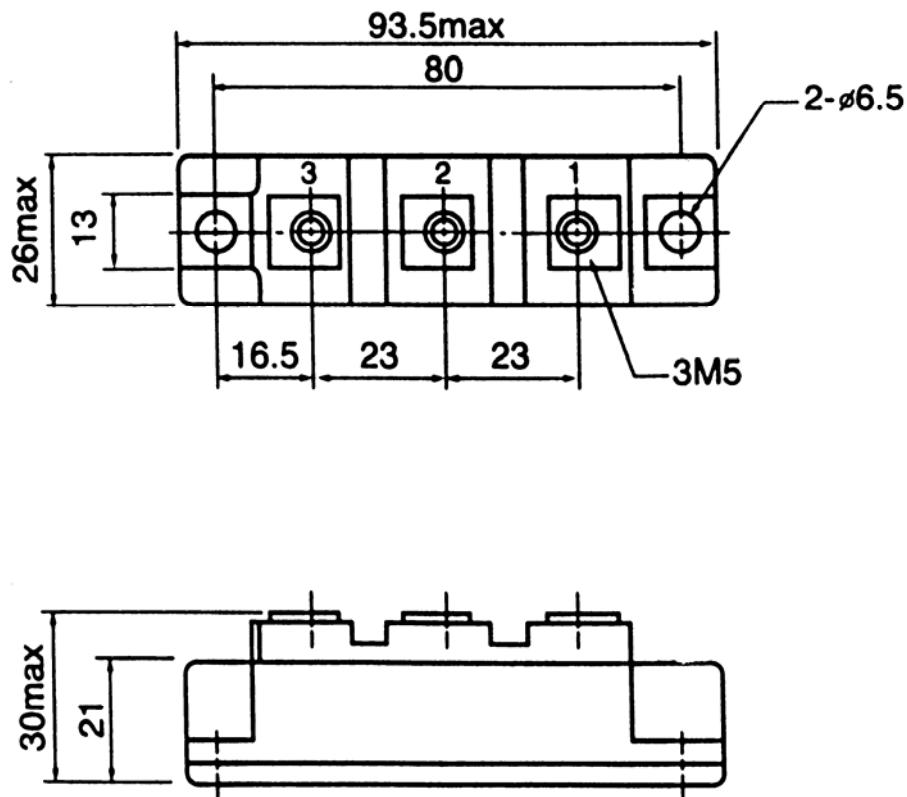
Symbol	Item	Ratings		Unit
		DCA150AA50	DCA150AA60	
V_{RRM}	Repetitive Peak Reverse Voltage	500	600	V
$V_{R(DC)}$	Reverse D.C. Voltage	400	480	V

$I_{F(AV)}$	Average Forward Current	D.C., $T_c = 72^\circ C$	150	A
I_{FSM}	Surge Forward Current	$\frac{1}{2}$ cycle, 60Hz, Peak value, non-repetitive	2500	A
$I^2 t$	$I^2 t$ (for fusing)	Value for one cycle surge current	26000	$A^2 s$
T_j	Junction Temperature		-40 to +150	$^\circ C$
T_{stg}	Storage Temperature		-40 to +125	$^\circ C$
V_{ISO}	Isolation Voltage (R.M.S.)	A.C. 1 minute	2500	V
	Mounting Torque	Mounting M6	Recommended 2.5-3.9	N·m
		Terminal M5	Recommended 1.5-2.5	
	Mass	Typical Value	170	g

< Electrical Characteristics >

$T_j = 25^\circ\text{C}$ (unless otherwise noted) per diode

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	$V_R = V_{RRM}$, $T_j = 125^\circ\text{C}$			150	mA
V_{FM}	Forward Voltage Drop	$I_F = 150\text{A}$, Inst. measurement		1.18	1.30	V
t_{rr}	Reverse Recovery Time	$I_F = 150\text{A}$, $V_R = 300\text{V}$, $-di/dt = 100\text{A/FS}$		230	300	n s
t_b/t_a	Softness	$I_F = 150\text{A}$, $V_R = 300\text{V}$, $-di/dt = 100\text{A/FS}$	0.8			
$R_{th(j-c)}$	Thermal Resistance	Junction to case, $\frac{1}{2}$ module			0.4	$^\circ\text{C/W}$



* Dimensions in millimeters