SanRex

ISOLATED DIODE MODULE (SOFT RECOVERY DIODE)

## DCA100AA50/60 V$_{RRM}$=500/600V, I$_{FAV}$=100A, trr=220ns, Softness=0.8

SanRex Soft Recovery Diode Module **DCA100AA** 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

UL;E76102 (M)

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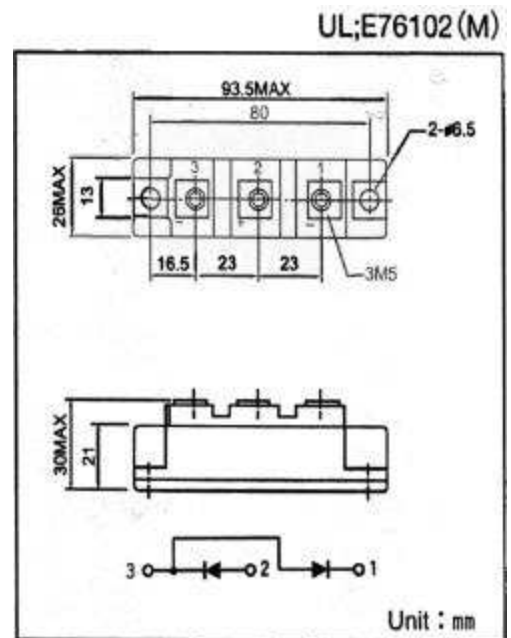
< Maximum Ratings >   (Tj = 25°C unless otherwise specified)

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

Symbol	Item	Conditions	Ratings	Unit
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^{2}t	I^{2}t (for fusing)	Value for one cycle surge current	16700	A^{2}s
Tj	Junction Temperature		-40 to +150	$^{\circ}$C
Tstg	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 (25-40)	4.7(48)	N·m (kgf·cm)
	Mounting Torque — Terminal M5	Recommended 1.5-2.5 (15-25)	2.7(28)	N·m (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°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/Fs		220	300	n s
t$_b$/t$_a$	Softness	I$_F$= 100A, V$_R$=300V, -di / dt = 100A/Fs	0.80			
Rth(j-c)	Thermal Resistance	Junction to case, ½ module			0.50	$^{\circ}$C/W