

SanRex®

ISOLATED DIODE MODULE (SOFT RECOVERY DIODE)

DSR400AA60

$I_{FAV}=400A$, $V_{RRM}=600V$, $t_{rr}=350ns$

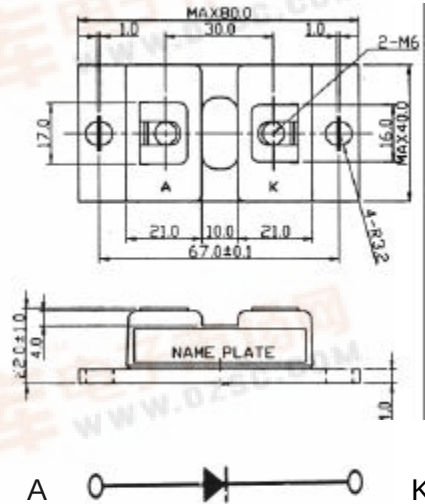
SanRex Soft Recovery Diode Module **DSR400AA** is designed for applications requiring fast switching and soft recovery wave shape to reduce or eliminate the need for snubber components in the circuit. It achieves very low thermal resistance by employing thermally conductive aluminum nitride isolation.

Features

- * Fast Reverse Recovery Time
- * Very Soft Recovery Characteristics
- * Low Forward Voltage Drop
- * Low Thermal Resistance

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 >

($T_j = 25^\circ C$ unless otherwise specified)

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

Symbol	Item	Conditions	Ratings	Unit
$I_{F(AV)}$	Average Forward Current	D.C., $T_c = 98^\circ C$	400	A
I_{FSM}	Surge Forward Current	$\frac{1}{2}$ cycle, 60Hz, Peak value, non-repetitive	8000	A
$I^2 t$	$I^2 t$ (for fusing)	Value for one cycle surge current	266000	$A^2 s$
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 (25-40)	N·m (kgf·cm)
		Terminal M6	Recommended 2.5-3.9 (25-40)	
	Mass	Typical Value	170	g

< Electrical Characteristics >

($T_j = 25^\circ C$ unless otherwise specified)

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive Peak Reverse Current	$V_R = V_{RRM}$, $T_j = 125^\circ C$			500	mA
V_{FM}	Forward Voltage Drop	$I_F = 400A$, Instant measurement		1.20	1.30	V
t_{rr}	Reverse Recovery Time	$I_F = 400A$, $-di/dt = 400A/FS$			350	ns
$R_{th(j-c)}$	Thermal Resistance	Junction to case			0.1	$^\circ C/W$

