# Fast & Soft Recovery Diode

# **DBA200UA60**

### IF(AV)= 2x100A, VRRM=600V, trr=150ns

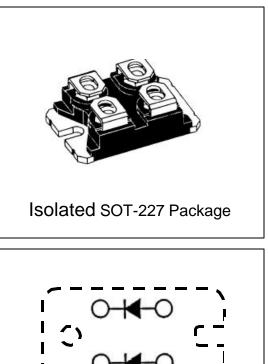
SanRex Fast & Soft Recovery Diode Module DBA200UA60 is designed for applications requiring fast switching and soft recovery wave shape to reduce or eliminate the need for snubber components in the circuit. The modules are isolated for easy mounting with other components or a common heatsink.

#### Features

- \* Very Fast Reverse Recovery Time
- \* Soft Recovery Characteristics
- \* Low Forward Voltage Drop
- \* Compact isolated SOT-227 package

#### 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



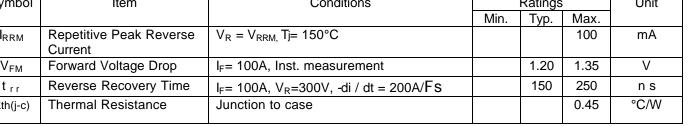
Internal schematic diagram

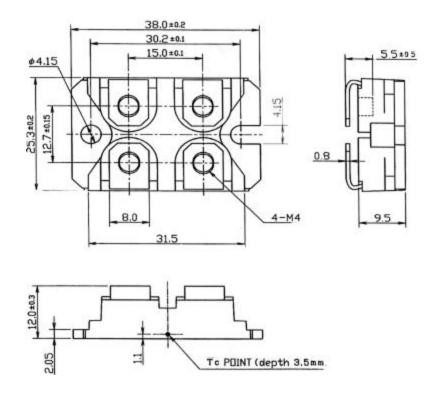
n Ratings >		$T_j = 25^{\circ}C$ (unless otherwise noted) per diode				
	Item	Conditions	Ratings	Unit		
Repetitive Voltage	Peak Reverse		600	V		
Reverse D	C. Voltage		480	V		
Average Fo	orward Current	D.C., T <sub>C</sub> = 89°C	100	А		
Surge Forv	vard Current	1/2 cycle, 60Hz, Peak value, non-repetitive	700	А		
I <sup>2</sup> t (for fusing)		Value for one cycle surge current	2100	A <sup>2</sup> s		
Junction Temperature			-40 to +150	C°		
Storage Temperature			-40 to +125	°C		
Isolation Voltage (R.M.S.)		A.C. 1 minute	2500	V		
Mounting	Mounting M4	Recommended 1.0-1.4	1.5	N∙m		
Torque	Terminal M4	Recommended 1.0-1.4	1.5			
Mass		Typical Value	30	g		
	Repetitive Voltage Reverse D. Average For Surge Forv I <sup>2</sup> t (for fusi Junction To Storage Te Isolation Vo Mounting Torque	Item Repetitive Peak Reverse Voltage Reverse D.C. Voltage Average Forward Current Surge Forward Current I <sup>2</sup> t (for fusing) Junction Temperature Storage Temperature Isolation Voltage (R.M.S.) Mounting Mounting M4 Torque Terminal M4	Item       Conditions         Repetitive Peak Reverse Voltage       Conditions         Reverse D.C. Voltage       D.C., T <sub>C</sub> = 89°C         Average Forward Current       D.C., T <sub>C</sub> = 89°C         Surge Forward Current       ½ cycle, 60Hz, Peak value, non-repetitive         I²t (for fusing)       Value for one cycle surge current         Junction Temperature       Storage Temperature         Isolation Voltage (R.M.S.)       A.C. 1 minute         Mounting       Mounting M4         Torque       Terminal M4	ItemConditionsRatingsRepetitive Peak Reverse Voltage600Reverse D.C. Voltage480Average Forward CurrentD.C., T c = 89°CSurge Forward Current½ cycle, 60Hz, Peak value, non-repetitive00½ cycle, 60Hz, Peak value, non-repetitive1² t (for fusing)Value for one cycle surge current2100-40 to +150Junction Temperature-40 to +125Isolation Voltage (R.M.S.)A.C. 1 minuteMounting TorqueMounting M4Recommended 1.0-1.41.5		

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< Electri	cal Characteristics >	Tj= 25 <sup>°</sup> C (	Tj= 25 <sup>°</sup> C (unless otherwise noted) per diode				
Symbol	Item	Conditions	Ratings		Unit		
-			Min.	Тур.	Max.		
I <sub>RRM</sub>	Repetitive Peak Reverse Current	V <sub>R</sub> = V <sub>RRM,</sub> Tj= 150°C			100	mA	
$V_{FM}$	Forward Voltage Drop	I <sub>F</sub> = 100A, Inst. measurement		1.20	1.35	V	
t <sub>rr</sub>	Reverse Recovery Time	I <sub>F</sub> = 100A, V <sub>R</sub> =300V, -di / dt = 200A/Fs		150	250	ns	
Rth(j-c)	Thermal Resistance	Junction to case			0.45	°C/W	





\* Dimensions in millimeters