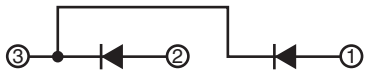
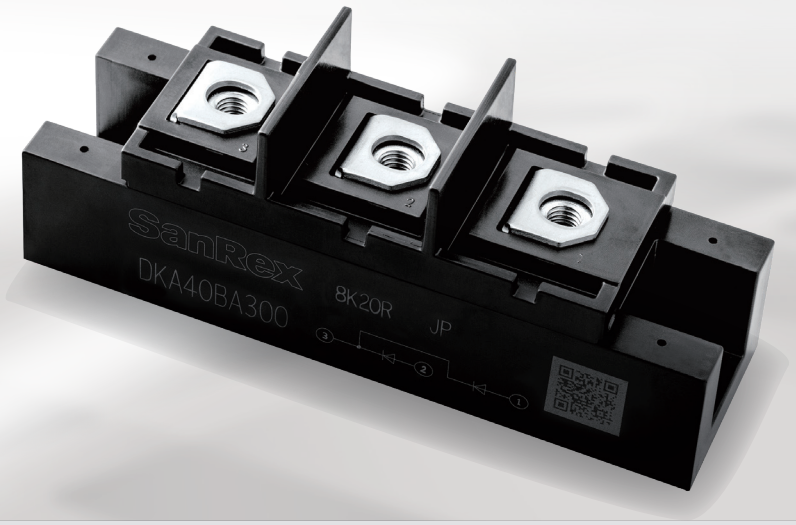
SanRex LEADING THE NEW POWER ELECTRONICS ▶▶

High Voltage Resistance Blocking Diode

DKA40BA300 (20A/3000V)





Applications

- String box for Solar (PV) power generation
- Reverse current prevention for DC line such as electric storage equipment

Features

■ DC1500V string
Suitable for solar power system

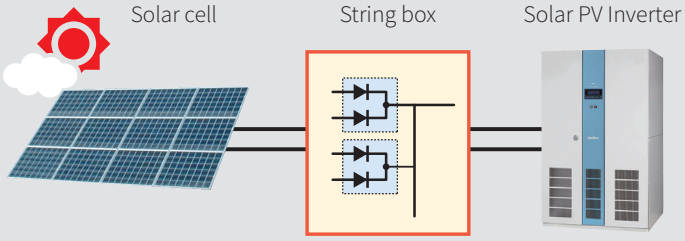
Efficiently protects solar cell modules and prevents power output

■ V_{RDC} 3000V (per chip) Isolated package

■ Achieving "Low loss" and "High heat dissipation" along with High Voltage Resistance thanks to our unique technology

■ Advantages of high voltage string

Allows loss reduction on the entire power generation system and improves power generation efficiency.
Less strings in parallel helps decreasing installation cost by reducing "wire length" and "circuits in junction box".



According to IEC60364-7-712 standard, maximum voltage must be twice the open circuit string voltage. (U OC STC)

Blocking Diode Line-up

String Voltage

For DC450V or less
DG20AA80/120/160

For DC600V to 750V
DKA60KB160

For DC1000V
DKA40AA220

Blocking Diode
DKA40BA300

Power semiconductor for photovoltaic system

Maximum Ratings

Tj = 25℃ unless otherwise specified

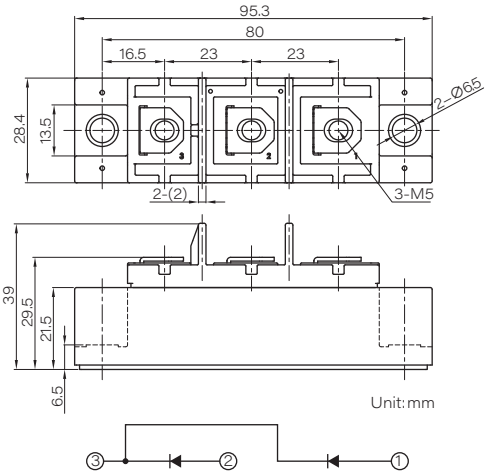
Item	Symbol	Unit	DKA40BA300
DC Reverse Voltage	$V_{R(DC)}$	V	3000

Item		Symbol	Unit	Rating	Conditions
Average Forward Current		$I_{F(AV)}$	A	20	DC Tc=125℃
Surge Forward Current		I_{FSM}	A	830 / 910	50/60Hz, Sin.Wave, Peak Value, Non-repetitive
I^2t (for fusing)		I^2t	A^2s	3440	Value for one cycle of surge current
Isolation Voltage		V_{ISO}	V	4500	Terminals to case, AC RMS 1minute
Operating Junction Temperature		Tj	℃	−40 to +150	
Storage Temperature		Tstg	℃	−40 to +125	
Mounting Torque	Mounting (M6)		N・m (kgf・cm)	4.7 (48)	Recommended value 2.5 to 3.9 (25 to 40)
	Terminal (M5)			2.7 (28)	Recommended value 1.5 to 2.5 (15 to 25)
Mass			g	150	Typical value

Electrical Characteristics

Tj = 25℃ unless otherwise specified

Item	Symbol	Unit	Ratings			Conditions	
			Min.	Typ.	Max.		
Reverse Current	I_R	mA			10	V_R=3000V, Tj=150℃	
Forward Voltage	V_F	V		0.94	1.15	I_F=20A	Inst. measurement
Thermal Resistance	Rth (j-c)	℃/W			0.64	Junction to case (per Chip)	
Interface Thermal Resistance	Rth (c-f)			0.09		Case to Heat sink Thermal conductivity (Silicone grease) ≒ 9×10^{-3}[W/cm・℃]	



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