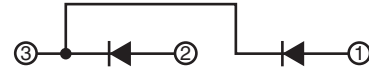


Blocking Diode

DKA40AA220 (20A/2200V)

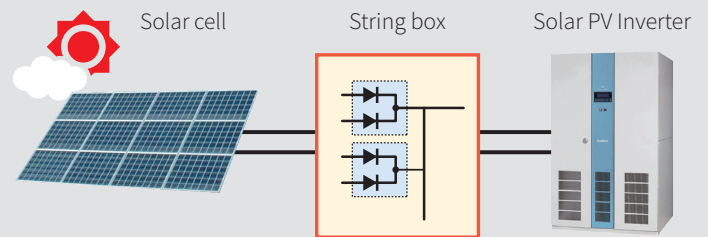


Applications

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

Features

- DC1000V string
Suitable for solar power system
Efficiently protects solar cell modules and prevents power output
- Unique terminal layout allows easy wiring.
- Usage of high voltage strings enables reduction of number and length of strings in the total system.
- Adoption of newly developed diode chip enables better V_F and thermal impedance.
- VRRM 2200V, 2 in isolated package
- Low V_F . $V_F(\text{typ.})=0.87\text{V}(I_F=10\text{A}, T_j=25^\circ\text{C})$



According to IEC60364-7-712 standard, maximum voltage must be twice the open circuit string voltage. ($U_{OC\text{ STC}}$)

Blocking Diode Line-up

String Voltage



For DC450V or less
DG20AA80/120/160



For DC600V to 750V
DKA60KB160



For DC1500V
DKA40BA300

Maximum Ratings

T_j = 25°C unless otherwise specified

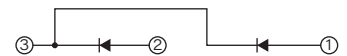
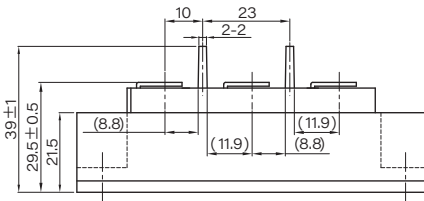
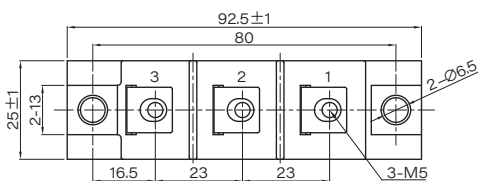
Item	Symbol	Unit	DKA40AA220
Repetitive Peak Reverse Voltage	V _{RRM}	V	2200
DC Reverse Voltage	V _{R(DC)}	V	2000

Item	Symbol	Unit	Rating	Conditions
Average Forward Current	per Module	I _{F(AV)}	A	DC T _c =125°C
	per Chip			
Surge Forward Current	I _{FSM}	A	985/1080	1/2 cycle, 50/60Hz, Peak value, non-repetitive
I ² t (for fusing)	I ² t	A ² s	4860	Value for one cycle of surge current
Operating Junction Temperature	T _j	°C	- 40 to +150	
Storage Temperature	T _{stg}	°C	- 40 to +125	
Isolation Breakdown Voltage	V _{ISO}	V	3000	AC RMS 1minute
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	170	Typical value

Electrical Characteristics

T_j = 25°C unless otherwise specified

Item	Symbol	Unit	Rating			Conditions
			Min.	Typ.	Max.	
Repetitive Peak Reverse Current	I _{RRM}	mA			10	V _R = V _{RRM} , T _j = 150°C
Forward Voltage Drop	V _{FM}	V		0.87	1.10	I _F = 10A, Inst. measurement
				0.92	1.15	I _F = 20A, Inst. measurement
Thermal Impedance	R _{th(j-c)}	°C/W			0.65	Junction to heatsink
Thermal Contact Impedance	R _{th(c-f)}			0.09		case to heatsink (per Module) Thermal conductivity of silicone grease ≈ 7 × 10 ⁻³ [W/cm · °C]



Unit : mm

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- Appearance and specifications of products are subject to change without notice for improvement reasons.

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