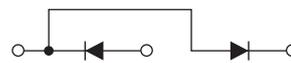


Soft Recovery Diode Module

DCA200UA65 (200A/650V)



Applications

- ▶ Plasma Cutting Machine
- ▶ Welding Machine
- ▶ Power Supplies
- ▶ PV Inverter
(Booster chopper circuit)

Features

■ Low loss

Achieve a balance between low loss ($V_F=1.4V$ [Typ]) and higher soft recovery characteristics due to a local lifetime control

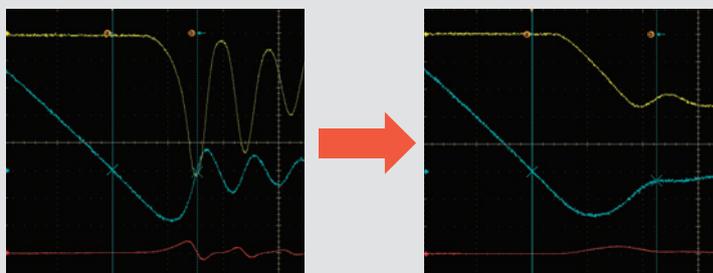
Low loss based on low $I_{RRM} \leq 50mA$, 50% lower than our existing product ($T_j=150^\circ C$)

■ Low noise

Reduce noises from surge voltage generated during reverse recovery operation

optimizing characteristics for application

Reverse Recovery Waveform



Standard Soft Recovery Diode

DCA200UA65

Maximum Ratings

T_j=25°C unless otherwise specified

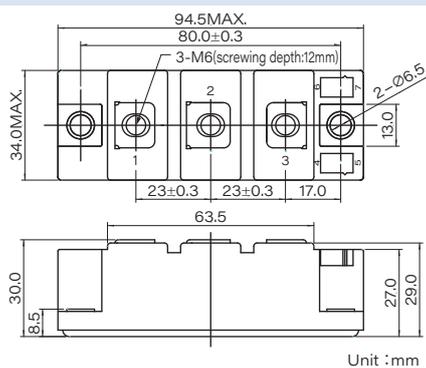
Item	Symbol	Unit	DCA200UA65	
Repetitive Peak Reverse Voltage	V _{RRM}	V	650	
DC Reverse Voltage	V _{R(DC)}	V	600	

Item	Symbol	Unit	Rating	Conditions
Output Current	I _{F(AV)}	A	200	DC T _c =85°C
Surge Forward Current	I _{FSM}	A	1350	1/2 cycle, 60Hz, Peak value, non-repetitive
I ² t (for fusing)	I ² t	A ² s	7500	Value for one cycle of surge current (60Hz)
Junction Temperature	T _j	°C	- 40 to +150	
Storage Temperature	T _{stg}	°C	- 40 to +125	
Isolation Voltage	V _{ISO}	V	2500	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 (M6)		4.7(48)	Recommended value 2.5 to 3.9 (25 to 40)
Mass		g	200	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			50	V _R =V _{RRM} , T _j =150°C
Forward Voltage Drop	V _{FM}	V		1.40	1.70	I _F =200A, Inst. measurement
Reverse Recovery Time	t _{rr}	ns		210	360	I _F =200A, V _R =300V, -di/dt=400A/μs
Reverse recovery peak current	i _{rr}	A		35	50	
Softness	t _b /t _a			1.0		
Threshold Voltage	V _{T(To)}	V			0.98	T _j =150°C
Slope Resistance	r _t	mΩ			3.0	T _j =150°C
Thermal Resistance	R _{th(j-c)}	°C/W			0.19	Junction to case, per 1/2 module
Interface Thermal Resistance	R _{th(c-f)}	°C/W			0.09	case to heatsink (per Module) per one module Thermal conductivity of silicon grease = 7 × 10 ⁻³ [W/cm · °C]



Other products

Soft Recovery / Fast Recovery Diode

DCA series 100/150/200A 	DBA series 200A 
FRS series 150/200/300/400A 	DKR Series 200/300/400A 

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

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