

Checklist for Bipolar Assemblies



Infineon Technologies Bipolar

Project Name

please refer to this name in every correspondence regarding the stack described below

Device

☐ Disc ☐ Module if possible

rectifier circuit with mid-point tapping

Uncontrolled ☐ M1U ☐ M2U ☐ M3U ☐ M3.2U ☐ M6U

Full controlled ☐ M1C ☐ M2C ☐ M3C ☐ M3.2C ☐ M6C

☐ with common cathode ☐ with common anode

bridge rectifier circuit

uncontrolled ☐ B2U ☐ B6U ☐ B6.2U

half controlled ☐ B2H ☐ B6H ☐ B6.2H ☐ thy. with common anode

full controlled ☐ B2C ☐ B6C ☐ B6.2C

prepared for operation ☐ parallel ☐ serial ☐ antiparallel

AC switch

half controlled ☐ W1H ☐ W2H ☐ W3H

full controlled ☐ W1C ☐ W2C ☐ W3C

supply voltage

frequency

V Hz

output current

ADC (rectifier) or A_{RMS} (AC switch)

load mode

☐ permanent

☐ overload overcurrent A time s preload current A

☐ non periodical overload according to separate diagram

temperature of cooling media (e.g. ambient temperature)

T_{min} °C T_{max} °C

cooling mode

☐ natural air ☐ forced air ☐ water ☐ oil ☐ own R_{tha} K/W

☐ without fan ☐ fan 230VAC ☐ fan 115VAC

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temperature switch

<input type="checkbox"/> without	<input type="checkbox"/> O (NC normally closed)	<input type="checkbox"/> S (NO normally open)
<input type="checkbox"/> special temperature		T <input type="text"/> °C

overvoltage protection

<input type="checkbox"/> no overvoltage protection	
<input type="checkbox"/> RC1: TSE - snubber circuit	<input type="checkbox"/> RC2: snubber input bridge
<input type="checkbox"/> RC3: RC1 + RC2	
<input type="checkbox"/> ARC: AC side RC-snubber	<input type="checkbox"/> DRC: DC side protection

fuses

<input type="checkbox"/> without	<input type="checkbox"/> cell fuses	<input type="checkbox"/> arm fuses
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quantity

<input type="text"/>	pieces
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attachments

<input type="text"/>	number of enclosed sheets / data files with additional information
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space for remarks

customer

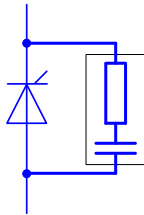
company:	<input type="text"/>	street:	<input type="text"/>
name:	<input type="text"/>	post box:	<input type="text"/>
phone:	<input type="text"/>	zip code/place:	<input type="text"/>
fax:	<input type="text"/>	country:	<input type="text"/>
e-mail:	<input type="text"/>	Date:	<input type="text"/>

please send back this checklist to your responsible sales or contact person – otherwise send back to
e-mail: support@infineon-bip.com or fax: 0049 (0)2902 9899-4 253

Overvoltage Protection Circuits

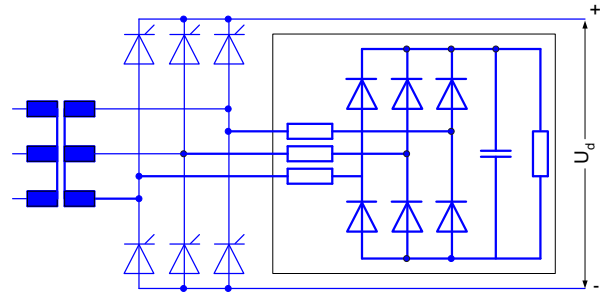
RC1 TSE snubber circuit

To avoid over voltages due to the reverse recovery charge effect every diode/thyristor is equipped with a parallel RC snubber which absorbs the charge/energy and which is a damping for possible oscillations.



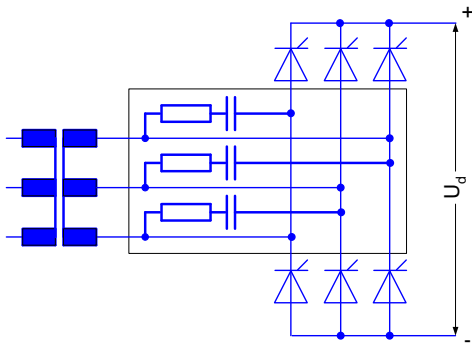
RC2 input snubber bridge

To absorb surge voltages of higher magnitude intruding from line an auxiliary rectifier is mounted in parallel to the rectifier. This auxiliary rectifier has a storage capacitor connected to the output which will absorb intruding surges. Besides this there is also a restricted functionality as TSE.



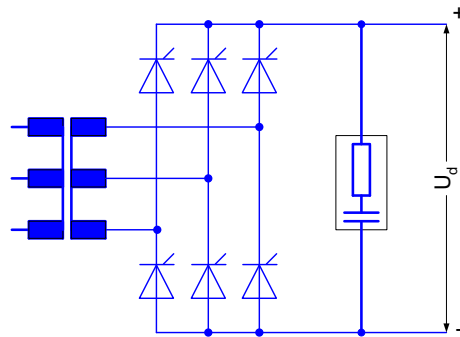
ARC AC side RC snubber

To absorb surge voltages of lower magnitude intruding from line RC snubber are placed phase to phase on the AC side of the rectifier (recommended for DC currents up to 200A)



DRC DC side RC snubber

To avoid overvoltage at the DC side of a rectifier a RC snubber is mounted. This is helpful if there is no capacitor as DC link close to the rectifier output



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rectifier circuits with mid-point tapping

M1U 	M2U 	M3 	M3.2U 	M6U
M1C 	M2C 	M3C 	M3.2C 	M6C

*) All star rectifiers available also with common anode.

bridge rectifier circuits

uncontrolled	B2U 	B6U 	B6.2U***
half controlled**	B2H 	B6H 	B6.2H***
full controlled	B2C 	B6C 	B6.2C***

**) All half controlled bridge rectifiers available also with thyristors with common anode.

***) Can be prepared for series, parallel or anti-parallel operation.

AC switches

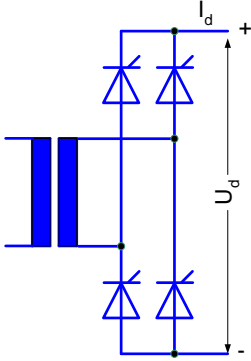
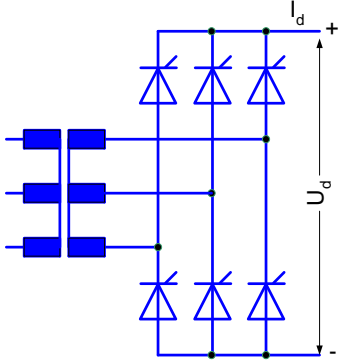
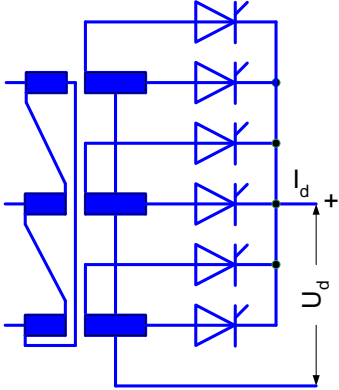
W1H 	W2H 	W3H
W1C 	W2C 	W3C

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Examples of most common standard circuits:

<div>B2</div> 	<div>B6</div> 
<div>M6</div> <div>especially for high current at low voltage</div> 	<div>M3.2</div> <div>especially for high current at low voltage</div> 