
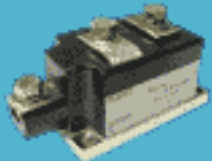
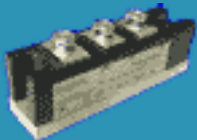



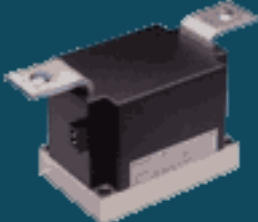


the figures in the part-no. represent the current rating [A]

part-no.	$V_{RRM, DRM}$	PowerBLOCK	part-no.	$V_{RRM, DRM}$	PowerBLOCK
TT 61 N TD/DT 61 N	1200...1600V	 <p>20 mm</p>	TZ 150 N	1800...2600V	 <p>50 mm</p>
TT 92 N TD/DT 92 N	1000...1600V		TZ 240 N	2800...3600V	
TT 104 N TD/DT 104 N	1000...1400V		TZ 310 N	2000...2600V	
TT 70 N TD 70 N	1600...2400V	 <p>25 mm</p>	TZ 400 N	2000...2600V	
TT 85 N TD/DT 85 N	2000V		TZ 425 N	1000...1800V	
TT 106 N TD/DT 106 N	1000...1800V		TZ 430 N	1800...2400V	
TT 121 N TD/DT 121 N	1200...2000V	 <p>30 mm</p>	TZ 500 N	1000...1800V	
TT 131 N TD/DT 131 N	1200...1600V		TZ 600 N	1000...1400V	
TT 122 N TD 122 N	1600...2400V		 <p>34 mm</p>	TT 240 N TD 240 N	
TT 140 N.	1600...2200V	TT 310 N TD/DT 310 N		2000...2600V	
TT 142 N TD/DT 142 N	1200...1600V	TT 380 N.		1000...1800V	
TT 162 N TD/DT 162 N	1200...1600V	TT 400 N.		2000...2600V	
TT 180 N	1200...1600V	TT 425 N TD/DT 425 N		1000...1800V	
TT 150 N TD/DT 150 N	1800...2600V	TT 430 N.		1800...2400V	
TT 170 N TD/DT 170 N	1000...1800V	 <p>60 mm</p>	TT 500 N TD/DT 500 N	1000...1800V	
TT 210 N TD/DT 210 N	1000...1800V		TT 570 N	1200...1600V	
TT 215 N TD 215 N	1800...2400V		TZ 530 N	3000...3600V	
TT 250 N TD/DT 250 N	1000...1800V		TZ 630 N	2200...2800V	
TT 251 N TD/DT 251 N	1000...1800V		TZ 740 N	1800...2200V	
TT 265 N	200...600V		TZ 800 N	1200...1800V	
TT 285 N TD/DT 285 N	1200...1600V		 <p>70 mm</p>	Common anode or cathode on request	
TT 330 N	1200...1600V				




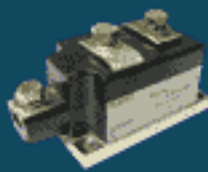
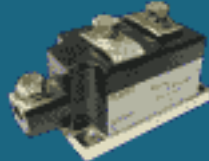

click on part-no. to select datasheet - click on other topologies to change menu

the figures in the part-no. represent the current rating [A]

part-no.	$V_{RRM, DRM}$	PowerBLOCK	part-no.	$V_{RRM, DRM}$	PowerBLOCK
DD 85 N	800...1600V	 20 mm	DD 175 N	2800...3400V	 50 mm
DD 89 N	1000...1800V		DD 231 N	2000...2600V	
DD 98 N	2000...2500V		DD 260 N ND 260 N	1000...1800V	
DD 104 N ND 104 N	1000...1800V		DD 261 N	2000...2600V	
DD 106 N	1200...2200V	 25 mm	DD 285 N	400...800V	
DD 151 N	1200...2000V	 30 mm	DD 350 N	1000...1800V	 50 mm
			DZ 540 N	2000...2600V	
			DZ 600 N	1200...1800V	DD 435 N
DD 540 N	2000...2600V	DD 600 N ND 600 N	1200...1800V		
DD 171 N ND 171 N	1200...1800V	 34 mm	DZ 950 N	3600...4400V	 70 mm
			DZ 1070 N	1800...2800V	

click on part-no. to select datasheet - click on other topologies to change menu

the figures in the part-no. represent the current rating [A]

Fast Thyristor Modules			Fast Diode Modules		
part-no.	$V_{RRM, DRM}$	PowerBLOCK	part-no.	$V_{RRM, DRM}$	PowerBLOCK
TT 46 F TD 46 F	800...1200V	 20 mm	DD 46 S	800...1200V	 20 mm
TT 71 F TD/DT 71 F	1000...1400V	 30 mm	DD 61 S	1000...1400V	
TT 81 F TD/DT 81 F	400...800V		DD 62 S	400...1000V	
TT 101 F TD/DT 101 F	1000...1400V		DD 81 S	1000...1400V	
TT 111 F TD/DT 111 F	800...1000V	 50 mm	DD 82 S	400...1000V	
TT 180 F TD/DT 180 F	1000...1300V		DD 121 S	1000...1400V	
TT 200 F TD/DT 200 F	1000...1300V		DD 122 S	400...1000V	 50 mm
TZ 335 F	1000...1300V		DD 230 S ND 230 S	1800...2600V	
		DD 241 S ND 241 S	1000...1400V		
			DD 242 S ND 242 S	600...1000V	 50 mm
			DZ 180 S *)	2500V	
			DZ 180 U *)	2500V	

*) base plate not electrically isolated

click on part-no. to select datasheet - click on other topologies to change menu

Type designations

Thyristors

T	930 S 18 T M C	
A		symmetrically blocking thyristor
		asymmetrically blocking thyristor
930		limiting average forward current (A) at $t_c = 85^\circ\text{C}$
0		Ceramic disc W
1		Ceramic disc P
4		Epoxy disc 19 mm high
6		Epoxy disc 35 mm high
7		Epoxy disc 8 mm high
8		Epoxy disc 14 mm high
9		Epoxy disc 26 mm high
2.Letter		
S		fast thyristor, gate-cathode interdigitated
F		fast thyristor, central gate
N		phase control thyristor
18		limiting repetitive peak forward and reverse off-state voltage in 100 V, 18 = 1800 V (A: repetitive peak forward off-state voltage)
3.Letter		mechanical construction
		anode: cathode:
B		metric thread cable
C		metric thread solder pin
E		flat base cable
F		TO 220 case
T		disc
4.Letter		maximum turn-off time
A		8 μs
B		10 μs
C		12 μs
D		15 μs
S		18 μs
E		20 μs
F		25 μs
G		30 μs
K		40 μs
M		50 μs
P		55 μs
N		60 μs
T		80 μs
U		120 μs
O		no guaranteed max. value
1		see data sheet
2		see data sheet
5.Letter		critical rate of rise forward voltage, thyristors for line commutated converters:
B		50 V/ μs
C		500 V/ μs
F		1000 V/ μs
G		1500 V/ μs
H		2000 V/ μs
		thyristors for self-commutated converters:
		critical rate of rise of forward voltage
		according to DIN IEC 747-6:
		immediately after turn-off:
B		50 V/ μs 50 V/ μs
C		500 V/ μs 500 V/ μs
F		1000 V/ μs 1000 V/ μs
L		500 V/ μs 50 V/ μs
M		1000 V/ μs 500 V/ μs
N		1000 V/ μs 50 V/ μs

Rectifier diodes

D	1809 N 32	
D		diode
		limiting average current (A)
1809		as a rule at $t_c = 100^\circ\text{C}$
		rectifier diode:
N		anode on case or press-pack
K		cathode on case
S		fast rectifier diode: anode on case or press-pack
U		cathode on case
32		limiting repetitive peak reverse voltage in 100 V
		mechanical construction:
A		metric thread wire
B		metric thread cable
C		stud solder pin
E		flat-base cable
T		press-pack
A		Avalanche Diode anode / case
B		Avalanche Diode cathode / case

Half-controlled thyristor modules

TD	121 N 18 K O F -A	
TD,DT		with 1 symmetric thyristor and 1 diode
AD		with 1 asymmetric thyristor and 1 diode (for circuit see outline)
		limiting average on-state current (A), $t_c = 85^\circ\text{C}$
121		phase control thyristor and rectifier diode
N		fast thyristor
F		and fast diode
S		fast thyristor with interdigitated gate and fast diode
18		repetitive peak-off-state voltage in 100 V
K		mech. constr.: pressure contact
O		turn-off time (see thyristors)
F		critical rate of rise of off-state voltage
		-A special design with common anode
		-K special design with common cathode

Fully controlled Thyristor modules

TT	121 N 18 K O F -A	
TT		with 2 symmetric thyristors
TZ		with 1 symmetric thyristor
		limiting average on-state current (A), $t_c = 85^\circ\text{C}$
121		phase control thyristor
N		fast thyristor with central gate
F		repetitive peak off-state voltage in 100 V
18		mech. constr.: module-DCB
L		mech. constr.: module
K		turn-off time (see thyristors)
O		critical rate of rise of off-state voltage
F		special design with common anode
-A		special design with common cathode
-K		special design with common cathode

Diode modules

DD	151 N 18 K -A	
DD		dual version with 1 diode (for circuit see outline)
D, ND, DZ		limiting average forward current (A), $t_c = 100^\circ\text{C}$
151		rectifier diode
N		fast rectifier diode
S		repetitive peak off-state voltage in 100 V
18		mech. constr.: module-DCB
L		mech. constr.: module
K		special design with common anode
-A		special design with common cathode
-K		special design with common cathode

Bridge Rectifiers and AC-Switches

TD	B6 HK 105 N 16 KOF	
DD		diode module
TT		thyristor module
TD		thyristor/diode
	B6	three phase bridge
	W3	three phase AC-switch
	C	fully controlled
	H	half controlled
	U	uncontrolled
	K	common cathode of thyristors
	105	output current (A) (W3: RMS-current)
	N	phase control thyristor/diode
	16	repetitive peak off-state voltage in 100V
	L	mech. constr.: module
	R	outline: ECONOPACK
	RR	outline: ECONOPACK with integr. brake chopper IGBT
	O	no guaranteed turn-off time
	F	critical rate of rise of off-state voltage

IGBT modules Type designation

IGBT & Diode: IHM/IHV & all new eupec modules

FF	800 R 17 K F 6 D B2	
FF		Dual Switch
FZ		Single Switch
FS		3-phase full Bridge
FP		Power integrated Modul
F4-		One phase bridge
FD		Chopper config.
DD		Dual Diode
		(for circuit see outline)
	800	Max. DC-collector current (A)
	R	Reverse conducting
	S	Fast Short Tail IGBT Chip
	17	Collector-emitter-voltage in 100 V
	K	Mechanical construction: Module
	F	Fast switching IGBT Chip
	L	Low Loss IGBT Chip
	S	Fast Short Tail IGBT Chip
	E	Low Sat & fast IGBT ³ Chip
	1..n	Internal reference number
	C	With EmCon diode
	D	Higher rated diode
	B1..n	Construction variation
	S1..n	Electrical selection

IGBT & Diodes: BSM modules

BSM	100 GB 120 D N2 K	
B		Silicon
S		Type: S=Switch, Y = Diode
M		Module
	100	current rating $I_C = 100\text{ A}$
	G	technology: G = IGBT-technology
	B	Configuration:
		A = single switch / diode
		B = Halfbridge
		D = 3-phase full bridge
		T = Tripack (3 single switches)
		P = Power Integrated Module
		AL=Chopper, diode conn. to collector
		AR=Chopper, diode conn. to emitter
		max. coll.-emitter-voltage in 10V
	120	with fast internal diode
	D	low inductance module design
	N	Low Loss IGBT chip
	L	2nd generation silicon
	2	K design variation
	G	design variation
		S collector sense
		E xxxx special type with code-no.