

Type designations

Thyristors

T 930 S 18 T M C

T symmetrically blocking thyristor
 A asymmetrically blocking thyristor
 930 limiting average forward current (A) at $t_c = 85^\circ\text{C}$
 2. Letter

S fast thyristor, gate-cathode interdigitated
 FN fast thyristor, central gate phase control thyristor
 N 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

D 1809 N 32
 D diode
 1809 limiting average current (A) as a rule at $t_c = 100^\circ\text{C}$
 N rectifier diode: 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

Half-controlled thyristor modules

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

IGBT: IHM & IHV modules

FF 200 R 12 K F
 FF dual version
 FZ single version
 FS six pulse bridge
 F4 one phase bridge
 FD chopper config.
 DF chopper config. (for circuit see outline)
 200 max. DC-collector current (A)
 R reverse conducting
 12 collector-emitter-voltage in 100 V
 K mechanical construction: module
 F fast switching type
 L type with low V_{CEsat}
 S single inline
 1 internal reference number
 2 advanced
 3 2nd generation
 4 advanced
 4 2nd NPT generation

IGBT: BSM modules

BSM 100 GB 120 D N2 K
 B Silicon
 S Type: S=Switch, Y = Diode
 M Module
 100 current rating I_C
 G technology: G = IGBT-technology
 B Configuration:
 A = single switch / diode
 B = Halfbridge
 D = 3-phase full bridge
 T = Tripack
 P = Power Integrated Module
 AL=Chopper
 120 Voltage rating: $V_{CE} [V] / 10$ with fast internal diode
 D N low inductance module design
 2 2nd generation silicon
 K optional package variation
 S collector sense
 E xxxx special type with codo-no.