

Diode Dice

C-DWEP 69-12	(Sample)
	Packing method
C	Single dice in trays, electrically tested
T	Dice in wafers, unsawed, electrically tested, inked bad die
W	Dice in wafers on foil, sawed, electrically tested, inked bad die
	Die function
D	Silicon rectifier diodes
W	Unpackaged die
	Process characteristic
E	Super fast diode
F	Fast diode, $t_{rr} = 1$ ms
L	Super fast diode (low leakage current)
S	Mixed PN/Schottky-Diode, HiPerFRED
P	Planar passivated die, inverse polarity, anode upside
N	Planar passivated die, normal polarity, cathode upside
69	Current rating of die in amperes
-12	Voltage class, 12 = 1200 V

Breakover Diode Dice

C-BWP 1-10	(Sample)
	Packing method
C	Dice, single in trays, electrically tested
T	Dice in wafers, unsawed, electrically tested, inked bad die
W	Dice in wafers on foil, sawed, electrically tested, inked bad die
B	Breakover diode
W	Unpackaged die
P	Planar passivated die (cathode upside)
1	Current rating of die in amperes
-10	Voltage class, 10 = 1000 V

Discrete Rectifier Diodes

DSAI 35-16A	(Sample)
DS	Silicon rectifier diode (anode = housing)
A	Avalanche characteristic
D	Fast high voltage rectifier diode
E	Fast Recovery Epitaxial Diode (FRED)
S	Schottky diodes
P	Double diode (phase leg)
I	Inverse polarity
K	Double diode (common cathode)
P	Inverse polarity (cathode = housing)
35	Current rating of die in amperes
-16	Voltage class, 16 = 1600 V
A	Version A (see drawing)

Discrete FRED

DSEI 2x61-12B	(Sample)
DS	Silicon rectifier diode
E	Fast Recovery Epitaxial Diode (FRED)
S	Schottky diode
I	Standard FRED
P	HiPerFRED™
2x	Two single diodes in one housing
61	Current rating of die in amperes
-12	Voltage class, 12 = 1200 V
B	Version B (see drawing)

Thyristor Dice

W-CWP 55-12/18	(Sample)
	Packing method
W	Dice in wafers on foil, sawed, electrically tested, inked bad die
C	Dice, single in trays, electrically tested
T	Dice in wafers on foil, sawed, electrically tested, inked bad die
	Die function
C	SCR
W	Unpackaged die
	Process characteristic
P	Planar passivated die (cathode upside)
55	Current rating of die in amperes
12/18	Voltage class, 12/18 = 1200 to 1800 V

Discrete Thyristors

CS 35-12io4	(Sample)
CS	SCR
35	Current rating of thyristor in amperes
-12	Voltage class, 12 = 1200 V
i	Critical dv/dt-class, $i^3 \geq 1000$ V/ms $d \geq 20$ V/ms, $g \geq 200$ V/ms, $h \geq 500$ V/ms, $i \geq 1000$ V/ms, $z = \text{typ.}$ (See data sheet for values)
o	Turn-off time t_q (DIN 41787), $o = \text{typ.}$ (See data sheet for values) $y \leq 50$ V/ms, $x \leq 40$ V/ms, $w \leq 30$ V/ms, $v \leq 25$ V/ms, $u \leq 20$ V/ms, $p \leq 15$ V/ms, $t \leq 12$ V/ms, $s \leq 10$ V/ms, $r \leq 8$ V/ms
4	Version 4

Single and Three Phase AC Controller Modules

MMO 75-16io1	(Sample)
M	Module
V	Epoxy molded bridge
M	Single phase bridge, controlled (two thyristors)
L	Single phase bridge, half-controlled (thyristor/diode)
W	Three phase bridge, controlled
O	No meaning. Reserved for future function
75	Current rating (eff), 75 = 75 A~
-16	Voltage class, 16 = 1600 V
i	Critical dv/dt-class, $i \geq 1000$ V/ms
o	Turn-off time t_q , o = typ. (See data sheet for value)
1	Version 1

Thyristor/Diode Modules

MCC 312-16io1	(Sample)
M	Module
C	SCR
D	Diode
C	SCR
D	Diode
O	No meaning. Reserved for future function
312	Current rating of module in amperes
-16	Voltage class, 16 = 1600 V
i	Critical dv/dt-class, $i = 1000$ V/ μ s; $I = 2000$ V/ μ s
N	Standard diode
o	Turn-off time t_q , o = typ. (See data sheet for value)
1	Version 1 (thyristor: aux. cathode and gate; diodes: version only)
8	Version 8 (gate only)

FRED Modules

MEA 160-06DA	(Sample)
M	Module
E	FRED
P	HiPerFRED™
A	Double diode (common anode)
E	Double diode (phase leg)
K	Double diode (common cathode)
O	Single diode
160	Current rating of module in amperes
-06	Voltage class, 06 = 600 V
D	Fast diode with defined t_{rr}
A	Version A

Single and Three Phase Rectifier Bridge

VBO 20-16NO1(Sample)

V	Epoxy molded bridge
B	Single phase bridge, non-controlled
G	Single phase bridge, asymmetrical, half-controlled
H	Single phase bridge, symmetrical, half-controlled
K	Single phase bridge, controlled
U	Three phase bridge, non-controlled
V	Three phase bridge, half-controlled
E	Special circuit
T	Three phase bridge, controlled
UM	Power module with MOSFET
UG	Power module with IGBT
W	Three phase bridge
O	Without function, dummy
B	Braking system (IGBT/FRED)
C	Separate thyristor
F	Free-wheeling diode
Z	Thyristors, cathodes connected
E	Super Fast Diode (FRED)
Y	Special circuit
B	Braking system (IGBT/FRED)
D	Additional diode
W	AC controller output
20	Current rating of bridge in amperes
-16	Voltage class, 16 = 1600 V
N	Standard diode
A	Avalanche diode
g	Critical dv/dt (see thyristors)
O	Turn-off time t_q (DIN 41787)
1	Version 1

High Voltage Rectifier

UGE 0421 AY4

(Sample)

U	High voltage rectifier, U-Series
G	Non-controlled rectifier
E	One way circuit
B	Single phase bridge
D	Three phase bridge
	Code for Number of semiconductors
0	1-4
1	5-6
2	7-12
4	Number code for forward current in amperes $1 \leq 3$ A; $2 \leq 12$ A; $3 \leq 16$ A, $4 \leq 33$ A etc.
2	Number code for type of built-in semiconductors
1	Number code for voltage $1 \geq 1$ kV - 2 kV, $2 \geq 2$ kV - 3 kV etc.
A	A = Avalanche Diode
Y4	Housing type (see drawing) Y4 = round housing, A-N = plastic housing

IGBT and MOSFET Dice

W-IXSD 40N60A

(Sample)

W	Dice in wafers on foil, sawed, electrically tested, inked bad die
T	Dice in wafers, unsawed, electrically tested, inked bad die
C	Dice, single in trays, electrically tested
IX	IXYS
	Die function
S	IGBT with SCSOA capability
G	Fast IGBT
F	HiPerFET™ Power MOSFET
T	Standard power MOSFET
B	High voltage BIMOSFET
L	IGBT with SCSOA capability
V	Standard IGBT
E	HiPerFET™ Power MOSFET
M	Standard power MOSFET
D	Unpackaged die
40	Current rating, 40 = 40 A IGBT = Value at $T_c = 90^\circ\text{C}$ MOSFET = Value at $T_c = 25^\circ\text{C}$
N	N-channel type
P	P-channel type
60	Voltage class, 60 = 600 V
A	Version Standard MOSFET: A = prime $R_{DS(on)}$ IGBT: no letter = low $V_{CE(sat)}$ (first generation, not for new designs) A = fast switching (first generation, not for new designs) B = high speed type (for medium speed circuits) C = lightspeed type (for high speed circuits)

IGBT and MOSFET Modules

MII 200-12S4

(Sample)

M	Module
V	Module
I	IGBT with SCSOA capability
C	Thyristor
D	Diode
M	MOSFET
W	Three phase bridge
I	IGBT with SCSOA capability
C	Thyristor
D	Diode
E	IGBT (ISOSMART™)
K	Common cathode
M	MOSFET
O	Unspecified. Reserved for future function
200	Current rating 200 = 200 A ($T_c = 25^\circ\text{C}$)
-12	Voltage class, 12 = 1200 V
S	High speed type, IGBT
F	HiPerFET, MOSFET, n-channel
G	Low $V_{CE(sat)}$ type, IGBT
T	Standard MOSFET, n-channel
4	Version 4

Discrete IGBT and MOSFET

IXSK 50N60AU1	(Sample)
IX	IXYS
S	IGBT with SCSOA capability
G	Fast IGBT
F	HiPerFET™ Power MOSFET
T	Standard power MOSFET
B	High voltage BIMOSFET
L	IGBT with SCSOA capability
V	Standard IGBT
E	HiPerFET™ Power MOSFET
M	Standard power MOSFET
D	IGBT with SCSOA capability
P	MOS and IGBT combination
	Housing type
K	TO-264
H	TO-247
M	TO-204 (TO-3)
N	SOT-227 B (miniBLOC)
P	TO-220
U	TO-251 (DPAK)
A	TO-263 (D ² PAK)
X	PLUS 247 (TO-247 without mounting hole)
50	Current rating, 50 = 50 A (MOSFET = value at T _c = 25°C; IGBT = value at T _c = 90°C)
N	N-channel type
P	P-channel type
60	Voltage class, 60 = 600 V
D1	With integrated HiPerFRED™ (anti-parallel)
U1	With integrated FRED (anti-parallel)
U2	With integrated FRED (boost configuration)
U3	With integrated FRED (buck configuration)
A	Version
	Standard MOSFET: A = prime R _{DS(on)}
	IGBT: no letter = low V _{CE(sat)} (first generation, not for new designs)
	A = fast switching (first generation, not for new designs)
	B = high speed type (for medium speed circuits)
	C = lightspeed type (for high speed circuits)
S	SMD Version

Discrete BOD

IXBOD 1-42RD	(Sample)
IX	IXYS
BOD	Breakover diode
1	Version
-06	Voltage class, 06 = 600 V
R	Printed circuit board mounting
D	BOD protected from reverse voltage by a fast recovery diode