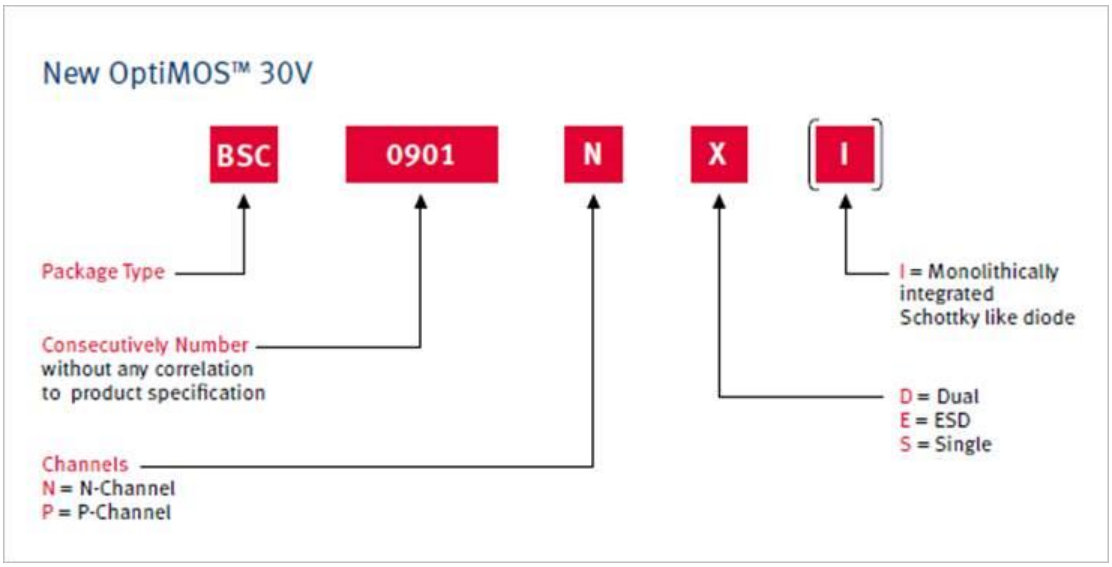
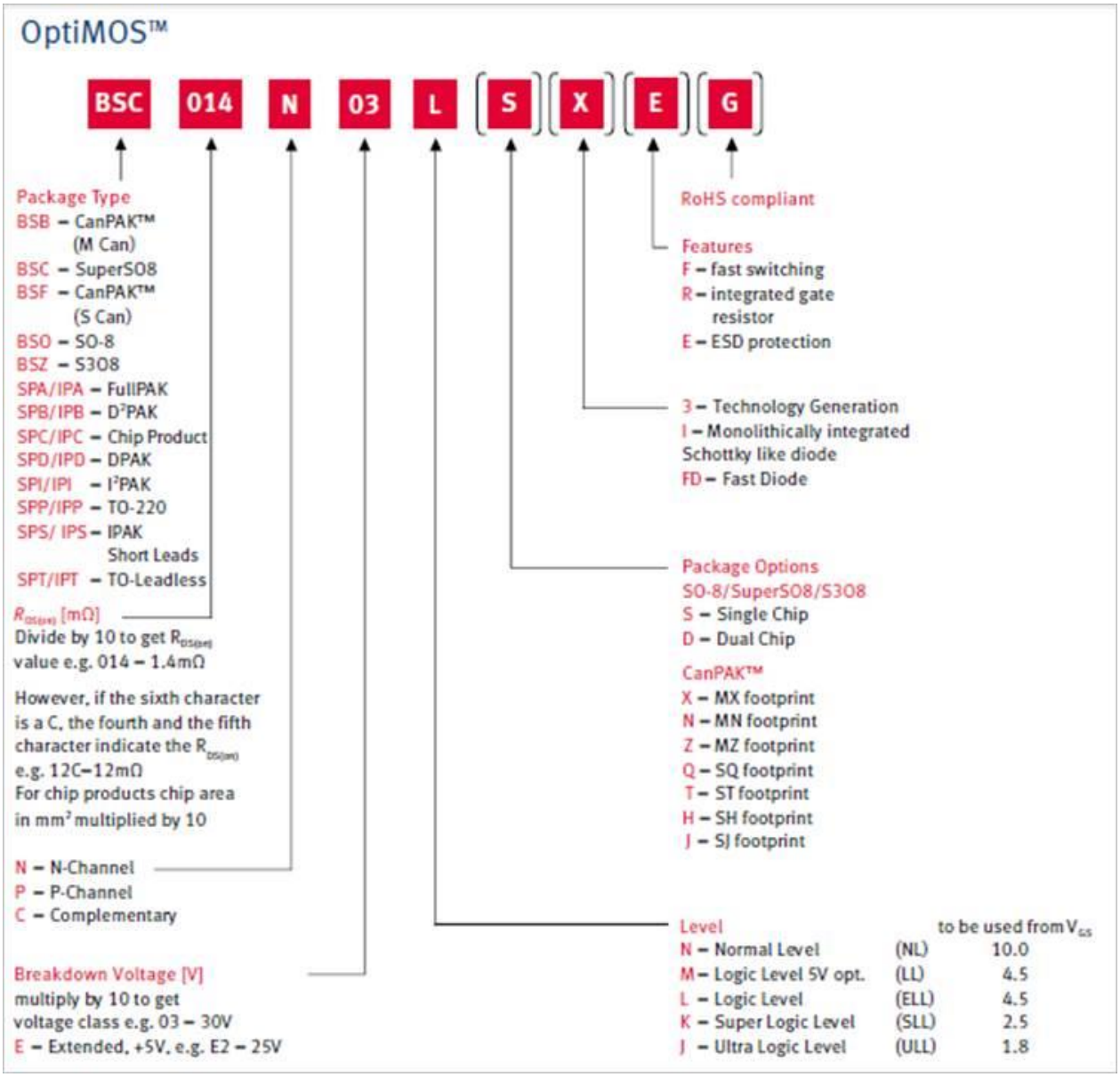
Product Nomenclature

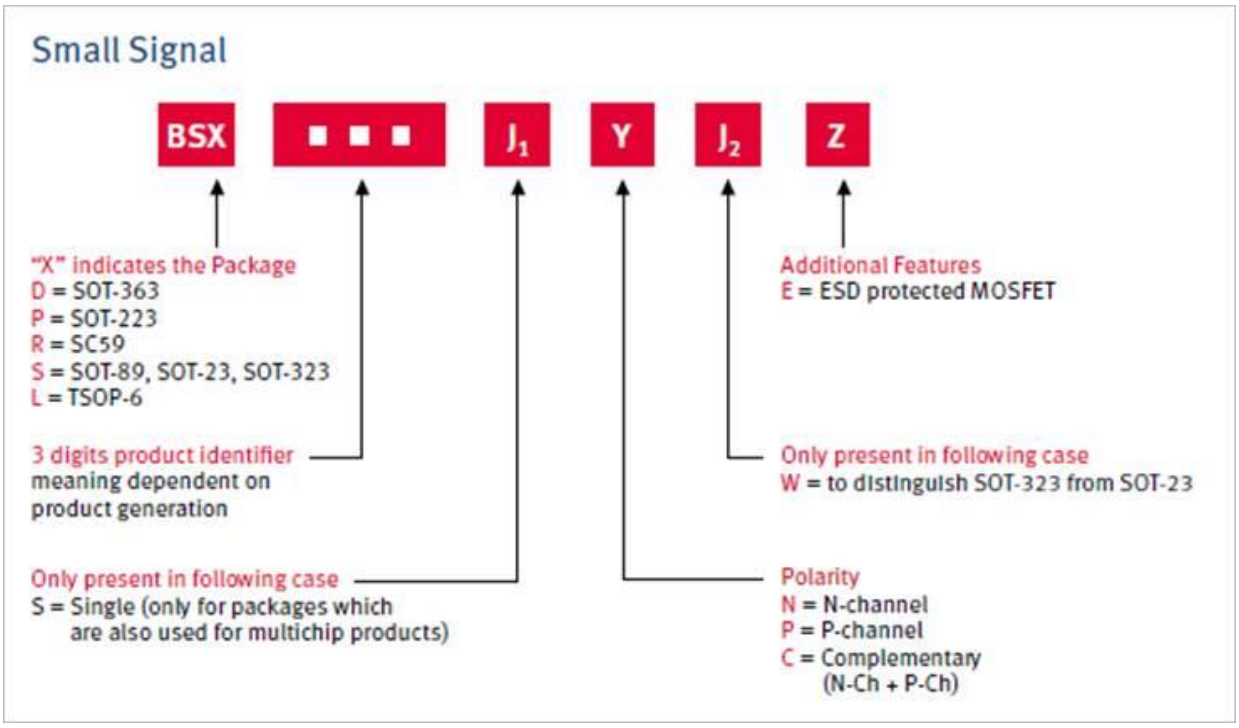
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1. PL 11

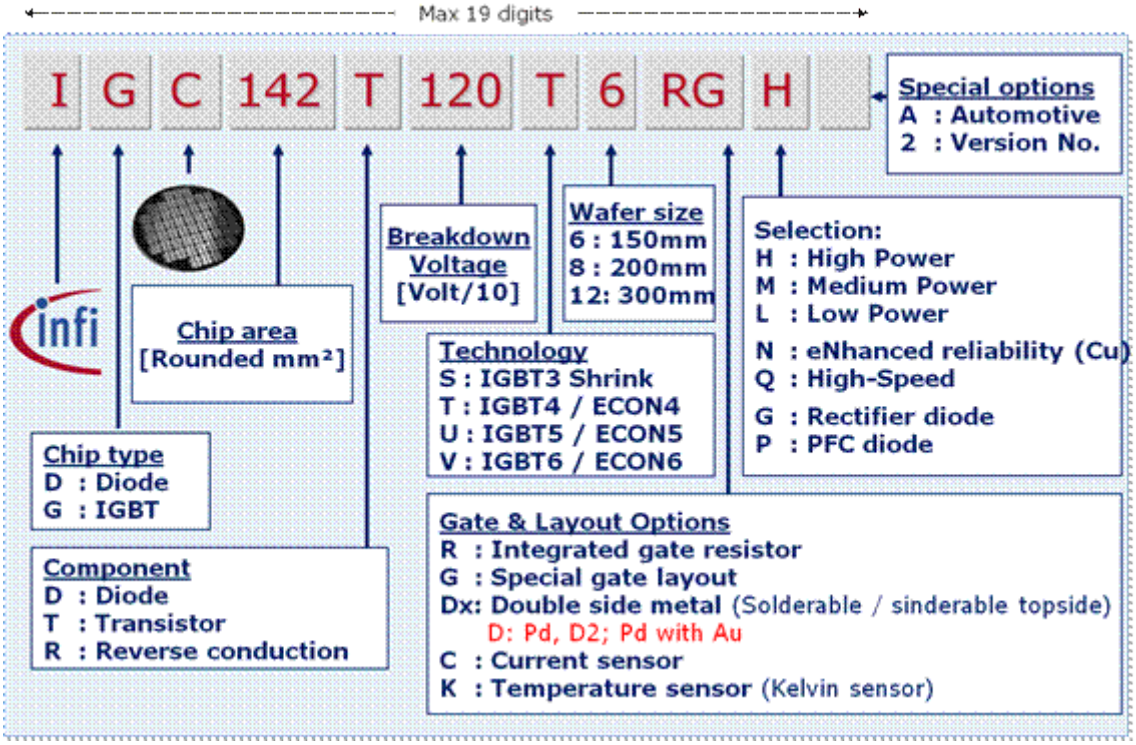

New OptiMOS™ 30V
BSC
0901
N
X
I
Package Type
Consecutively Number
without any correlation
to product specification
Channels
N = N-Channel
P = P-Channel
I = Monolithically
integrated
Schottky like diode
D = Dual
E = ESD
S = Single


OptiMOS™
BSC
014
N
03
L
S
X
E
G
Package Type
BSB – CanPAK™ (M Can)
BSC – SuperSO8
BSF – CanPAK™ (S Can)
BSO – SO-8
BSZ – S3O8
SPA/IPA – FullPAK
SPB/IPB – D²PAK
SPC/IPC – Chip Product
SPD/IPD – DPAK
SPI/IPI – I²PAK
SPP/IPP – TO-220
SPS/ IPS – IPAK Short Leads
SPT/IPT – TO-Leadless
RDS(on) [mΩ]
Divide by 10 to get RDS(on) value e.g. 014 – 1.4mΩ
However, if the sixth character is a C, the fourth and the fifth character indicate the RDS(on) e.g. 12C–12mΩ
For chip products chip area in mm² multiplied by 10
N – N-Channel
P – P-Channel
C – Complementary
Breakdown Voltage [V]
multiply by 10 to get voltage class e.g. 03 – 30V
E – Extended, +5V, e.g. E2 – 25V
RoHS compliant
Features
F – fast switching
R – integrated gate resistor
E – ESD protection
3 – Technology Generation
I – Monolithically integrated Schottky like diode
FD – Fast Diode
Package Options
SO-8/SuperSO8/S3O8
S – Single Chip
D – Dual Chip
CanPAK™
X – MX footprint
N – MN footprint
Z – MZ footprint
Q – SQ footprint
T – ST footprint
H – SH footprint
J – SJ footprint
Level
to be used from VGS
N – Normal Level (NL) 10.0
M – Logic Level 5V opt. (LL) 4.5
L – Logic Level (ELL) 4.5
K – Super Logic Level (SLL) 2.5
J – Ultra Logic Level (ULL) 1.8

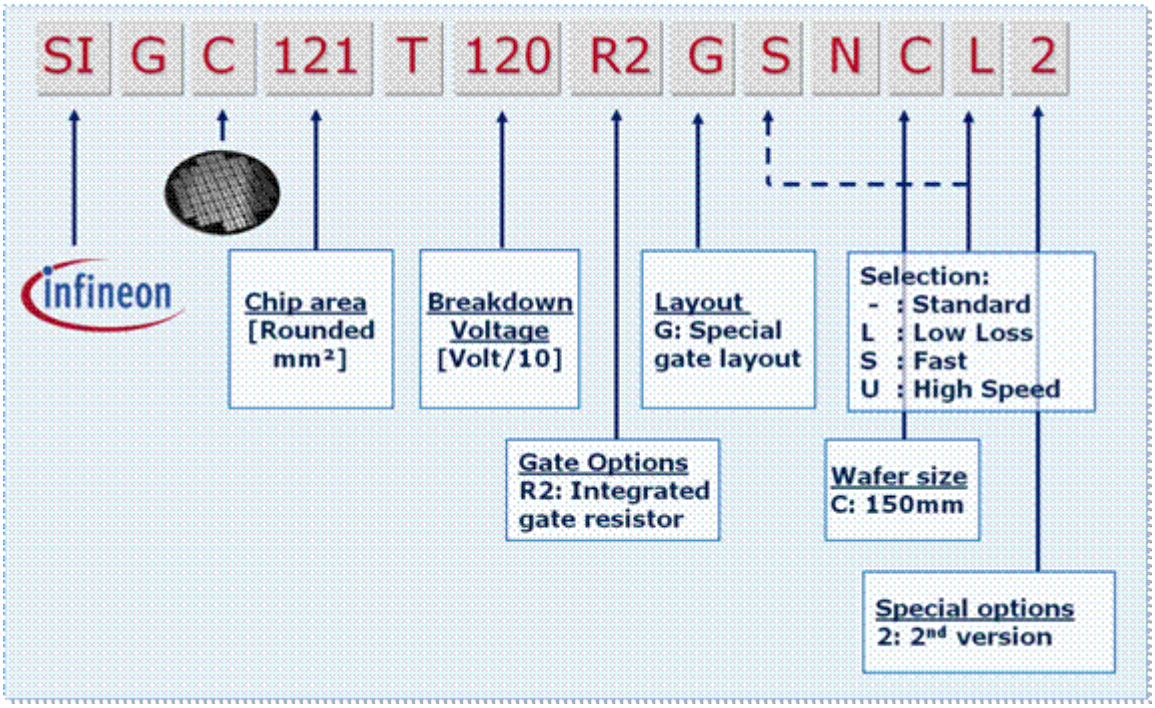


2. PL 14

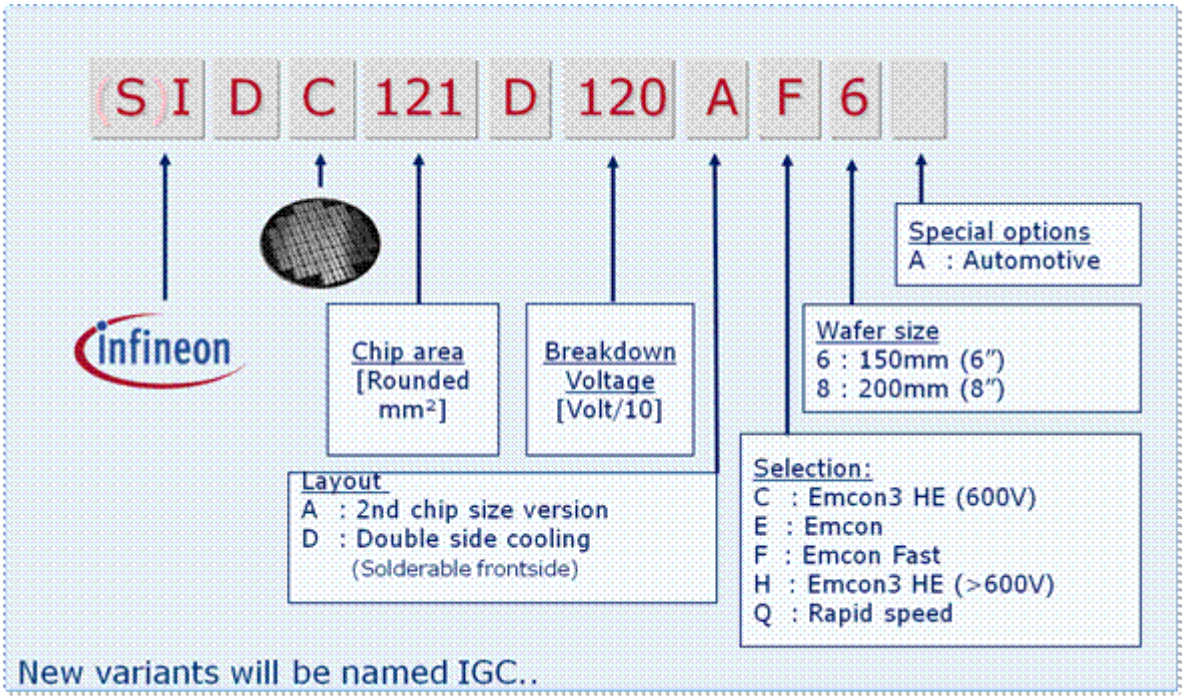
2.1. 3rd generation IGBT/ Diode chips



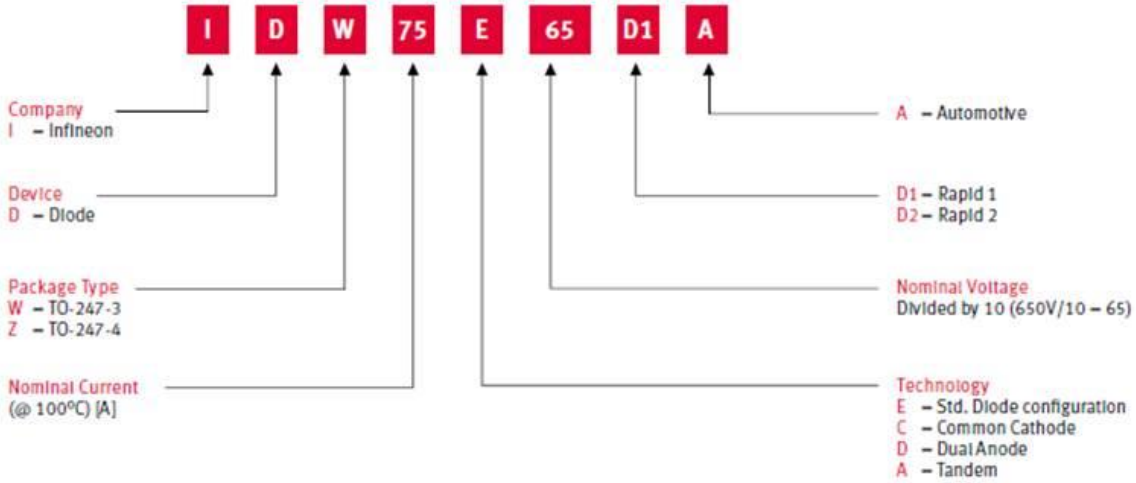
2.2. IGBT chips 2nd generation



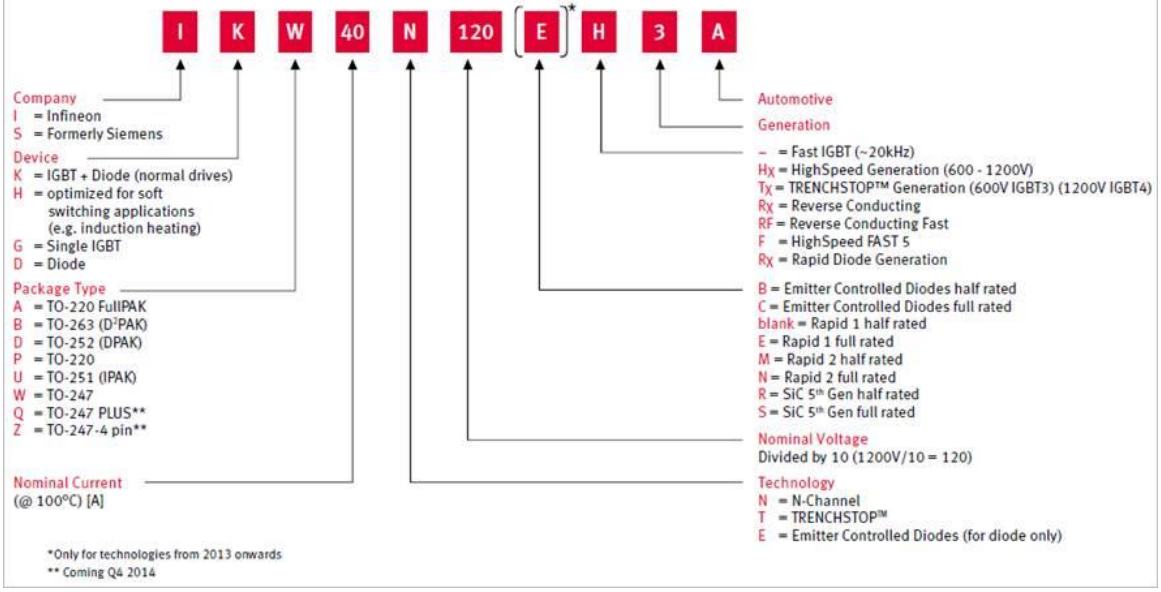
2.3. Emitter Controlled Diode – 2nd and 3rd generation



High Power Silicon Diodes

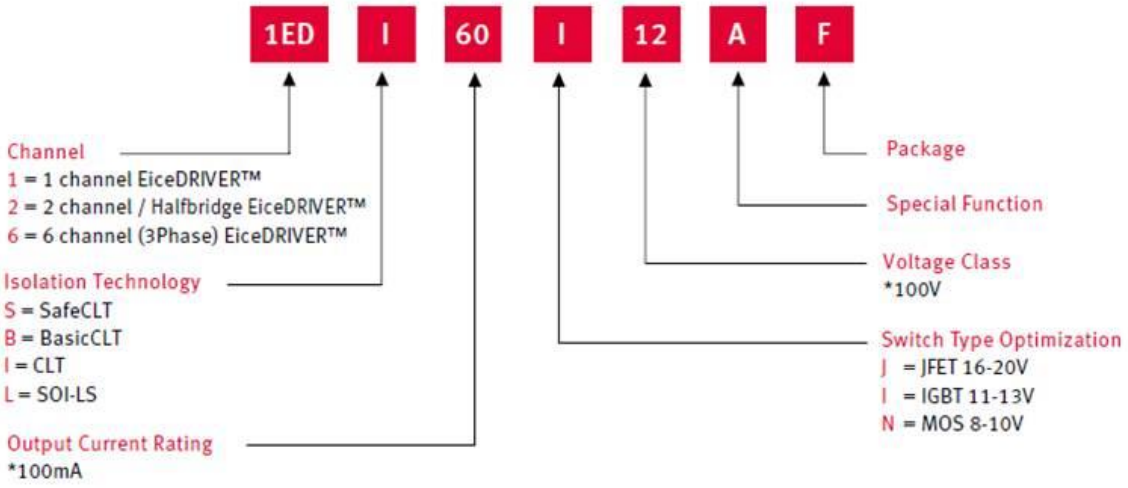


Discrete IGBT

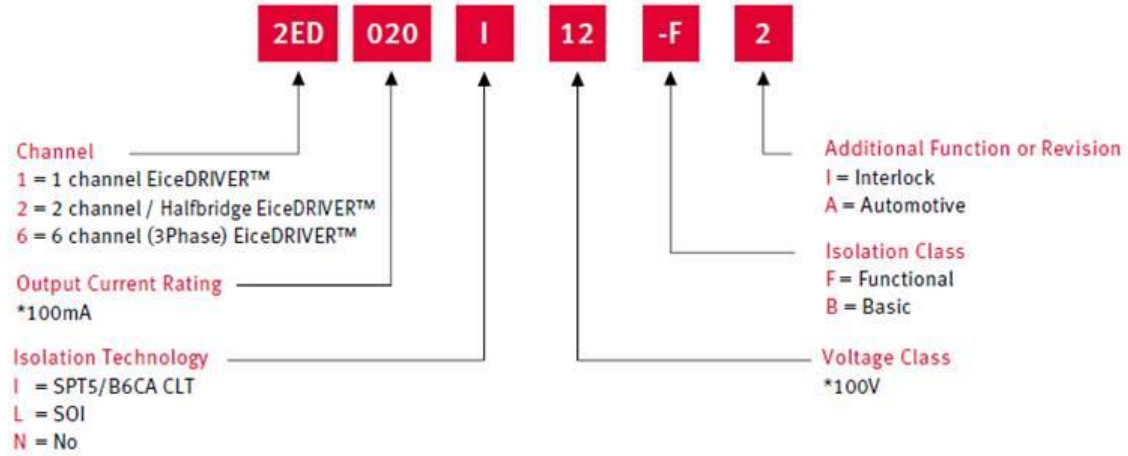


*Only for technologies from 2013 onwards
** Coming Q4 2014

EiceDRIVER™ (Gate Driver ICs since 2012)



EiceDRIVER™ (Driver Boards and existing Gate Driver)



3. PL 33

3.1. IGBT Modules

IGBT Modules						
FF	400	R33	K	F	x	example for an IGBT module
FZ						single switch with one IGBT and FWD
FF						half bridge (two IGBTs an FWDs)
FP						Power Integrated Module
FM						Matrix Module
FD/DF						chopper module
FB						Integrated modules in B2 configuration with IGBT & NTC
DD						dual diode module
FR						Switched Reluctance Modul
F3L						3-level configuration
FS3L						3-level 3 phase bridge
FT						tripack
F4						fourpack
F5						fivepack
FS						sixpack
	400					max. DC-collector current (A)
		R				reverse conducting
		S				fast Diode
		33				collector-emitter-voltage in 100 V
			K/H/I/M/N/O/P			mechanical construction:
			W/V/X/Y			module
				F		fast switching type
				H		high speed IGBT
				J		SiC JFET
				L		type with low V_{CEsat}
				M		MOSFET Chip
				S		fast short tail IGBT Chip
				E		low sat and fast trench IGBT
				T		fast trench IGBT
				P		soft switching trench IGBT
					1 ... n	internal reference numbers
					C	Emitter Controlled
					D	higher Diode current
					F	very fast Diode
					G	module in big housing
					I	integrated cooling
					P	with pre applied TIM
					R	reduced number of pins
					T	low temperature type
					-K	design with common cathode
					B1 ... n	Construction variation
					S1 ... n	Electrical selection

3.2. IGBT Modules (old naming)

IGBT Modules					
BSM	100	GB	120	DL x	example for a IGBT module with an old designation
BSM					switch with IGBT and FWD
BYM					diode module
	100				max. DC-collector current (A)
		GA			single switch with one IGBT and FWD
		GB			half bridge (two IGBTs and FWDs)
		GD			3 phase full bridge (6-pack)
		GT			3 single switches with FWDs (tripack)
		GP			Power Intergrated Module B6/Break/Inverter
		GAL			chopper module (diode on collector side)
		GAR			chopper module (diode on emitter side)
		A			single diode
			120		collector-emitter-voltage in 10 V
				DL	Typ with low V_{CEsat}
				DN2	fast switching type
				DLC	low loss type with Emitter Controlled Diode
				S	with collector sense
				G	Design Variation
				Exxx	special type

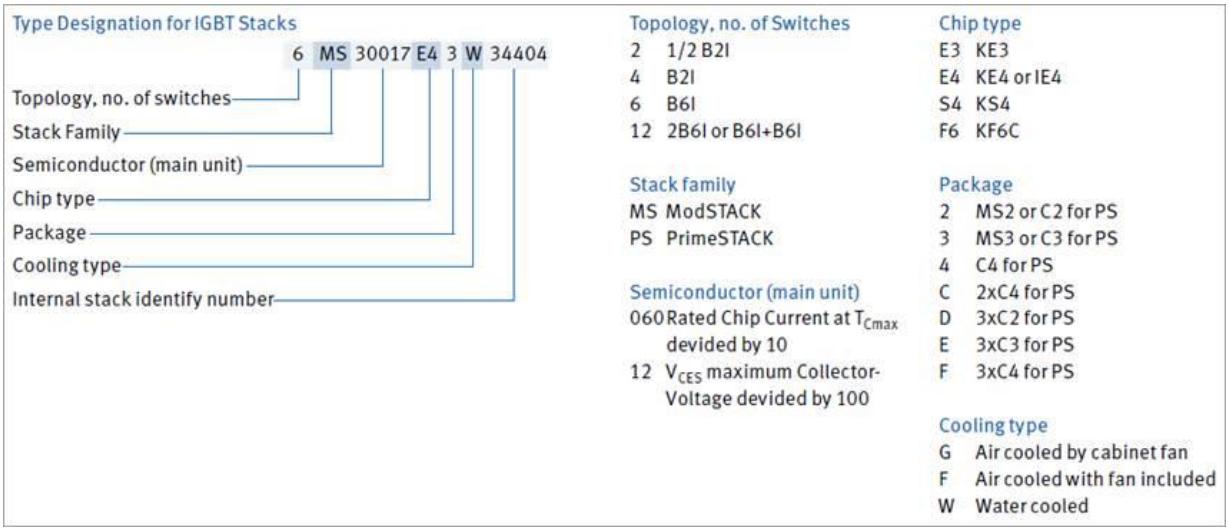
3.3. Bridge Rectifiers and AC-Switches

Bridge Rectifiers and AC-Switches									
TD	B6	H	K	135	N	16	L	OF	
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
				135					output current (A)
									(W3C: RMS-current)
					N				phase control thyristor/diode
						16			repetitive peak off-state
									voltage in 100 V
							L		eupec™ IsoPACK™
							R		EconoBRIDGE™ without integr.
									brake chopper IGBT
							RR		EconoBRIDGE™ with integr.
									brake chopper IGBT
								O	no guaranteed turn-off time
								F	critical rate of rise of
									off-state voltage

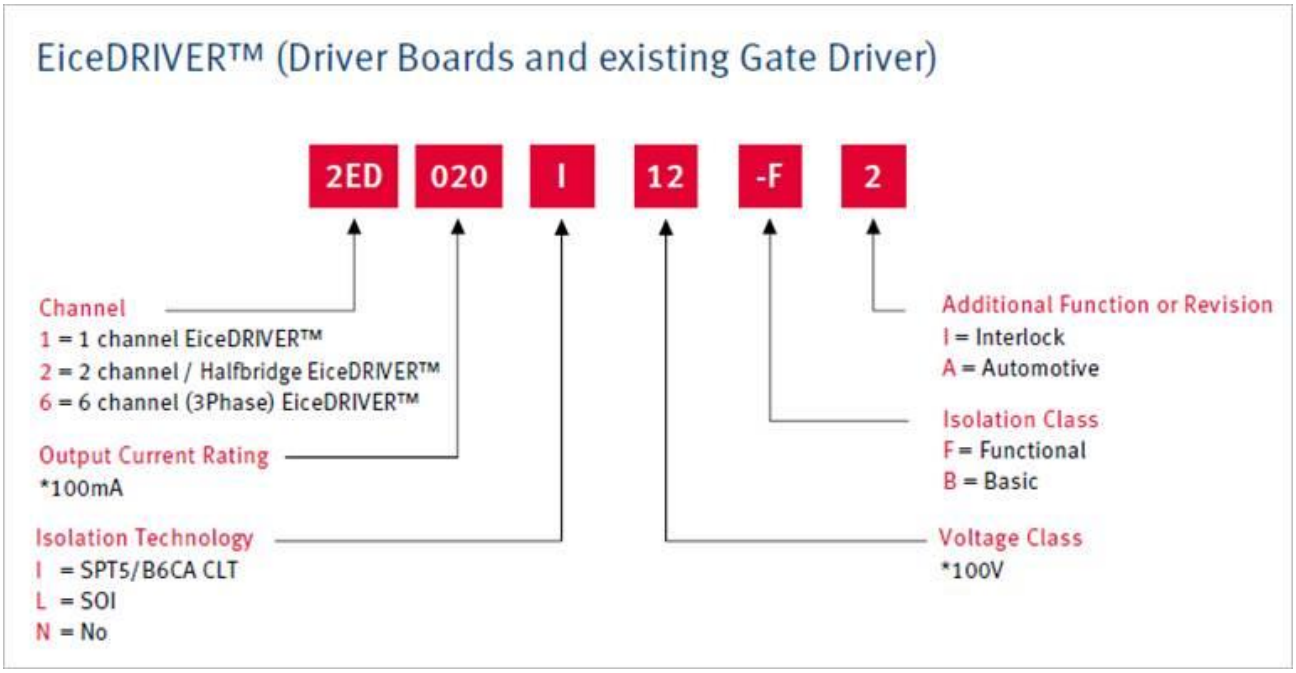
3.4. MIPAQ

MIPAQ							
IFF	150	B	12	N3	T	4	
I							MIPAQ™ family
FF							dual switch
FZ							single switch
FT							tripack
FS							3 phase full bridge
FP							power integrated module
	150						max. DC-collector current in A
							integration level:
		B					with current sensors
		S					with full digital current measurement
		V					with gate driver and temperature measurement
			12				collector-emitter-voltage in 100V
							mechanical construction: module
				N1..3			EconoPACK™ 1..3
				P			EconoPACK™ 4
				U1..3			package: Smart1..3
							chip technology
					S		fast short tail IGBT chip
					E		low sat and fast IGBT chip
					T		fast trench IGBT
					P		soft switching trench IGBT
						1..n	internal reference
						B1..n	construction variation
						S1..n	electrical selection

3.5. IGBT Stacks

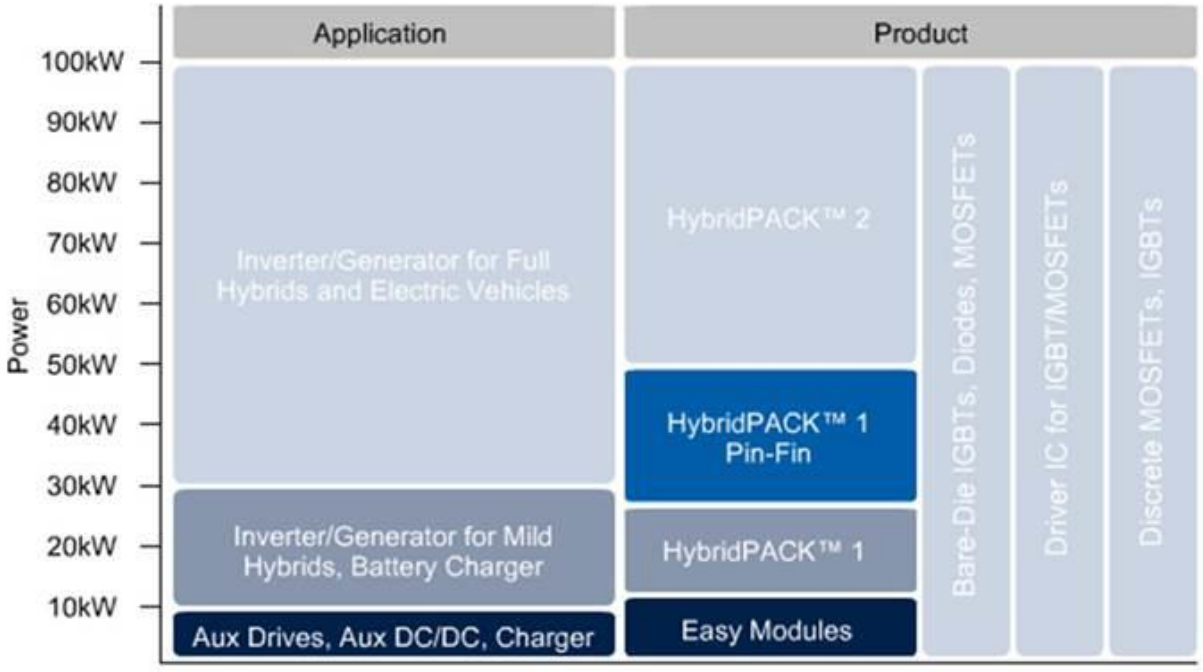


4. PL 34



5. PL 36

5.1. Automotive IGBT Modules

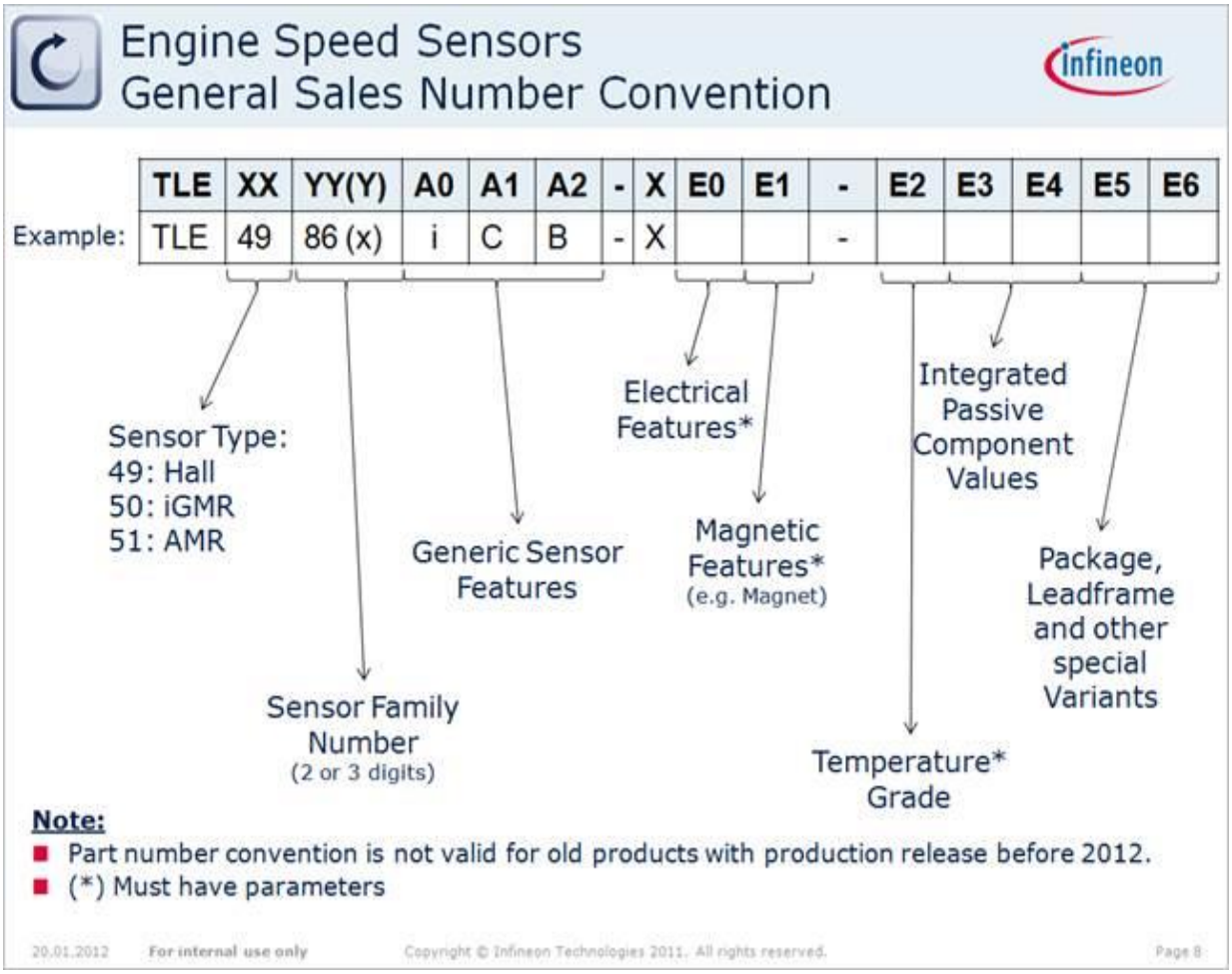


6. PL 42

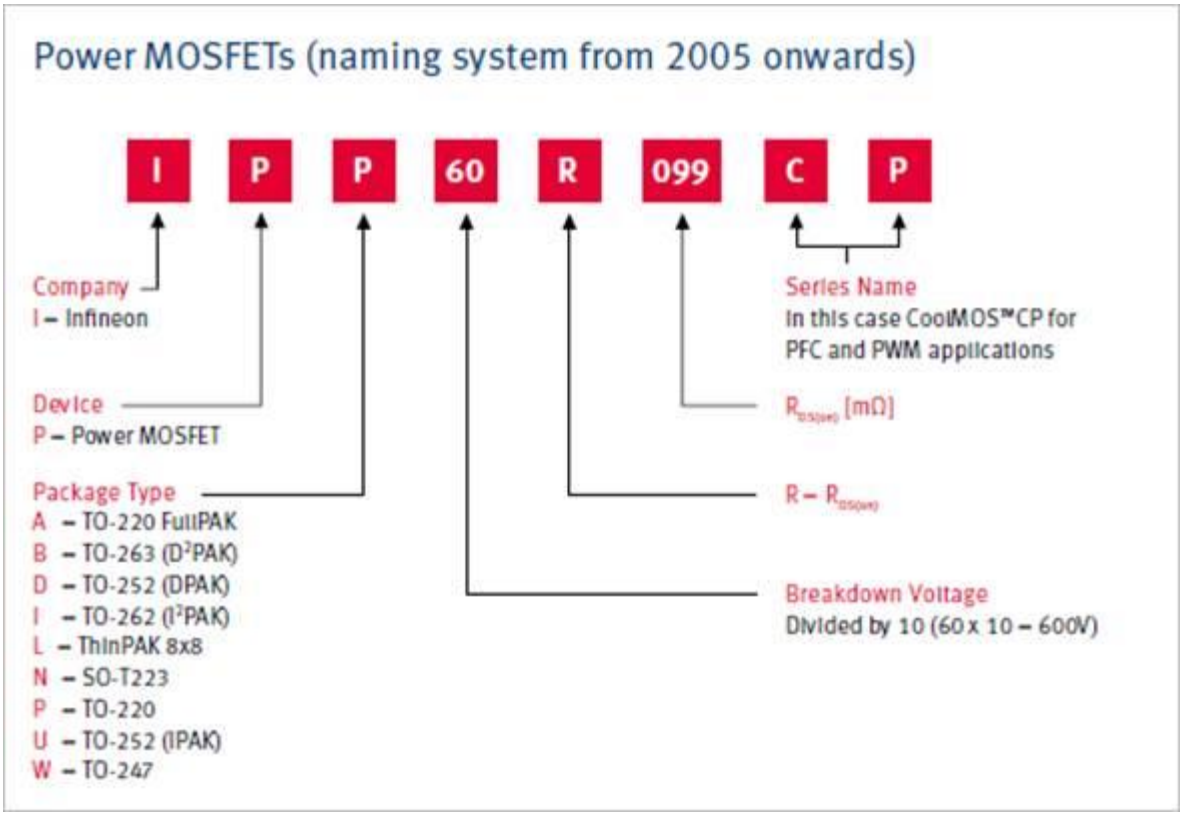
6.1. TLx

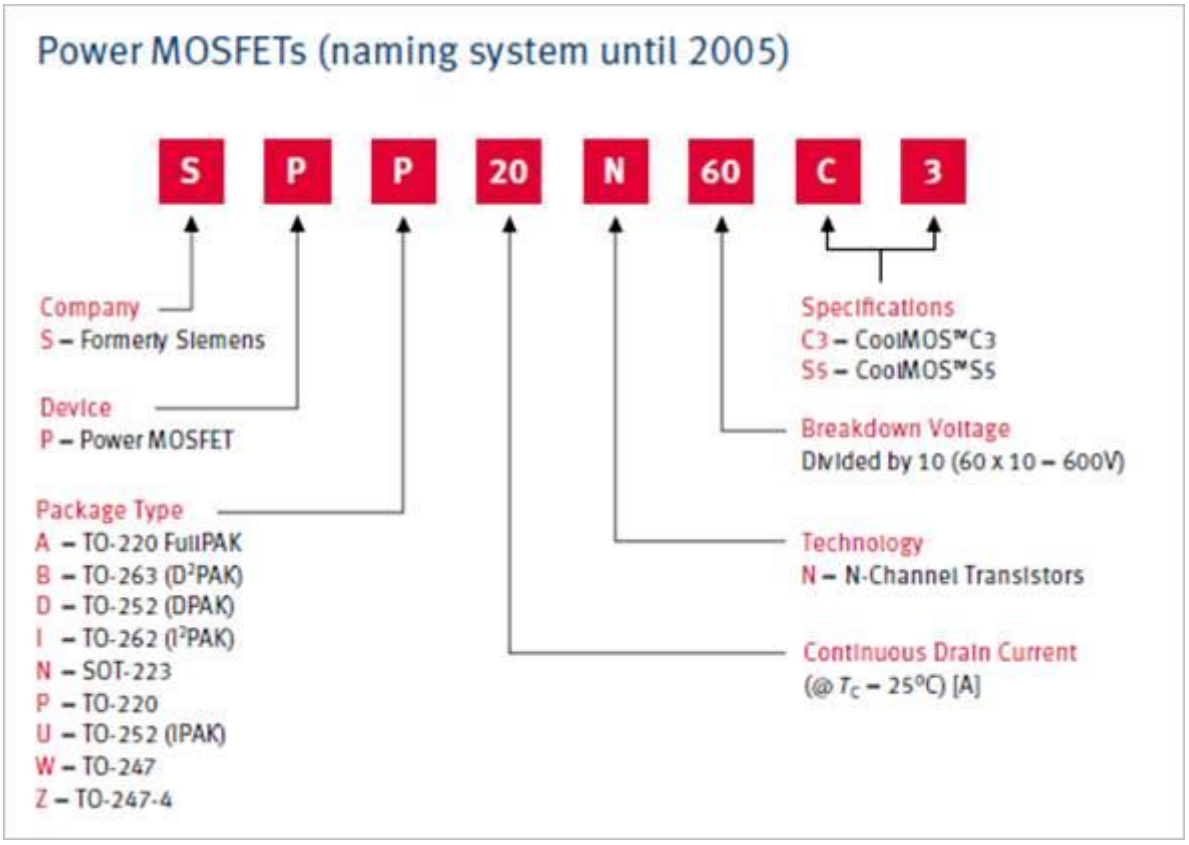
TLE = Automotive qualified
TLI = Industrial qualified
TLV = Consumer qualified.
TLE49xx = Sensor using Hall-Technology,
TLE50xx = Sensor using GMR technology,
TLE51xx = Sensor using AMR Technology.
The last two digits are product numbers.

6.2. Engine Speed Sensors

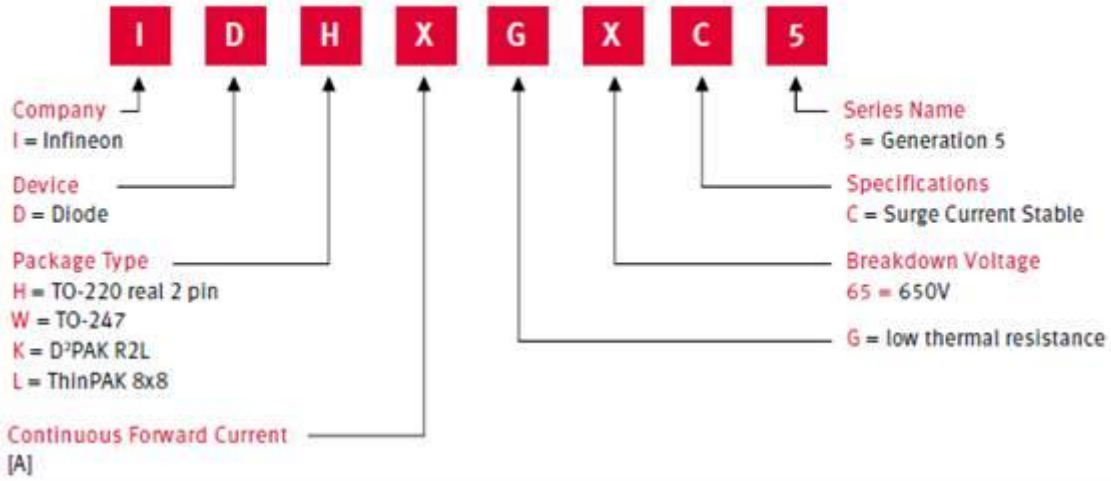


7. PL 52

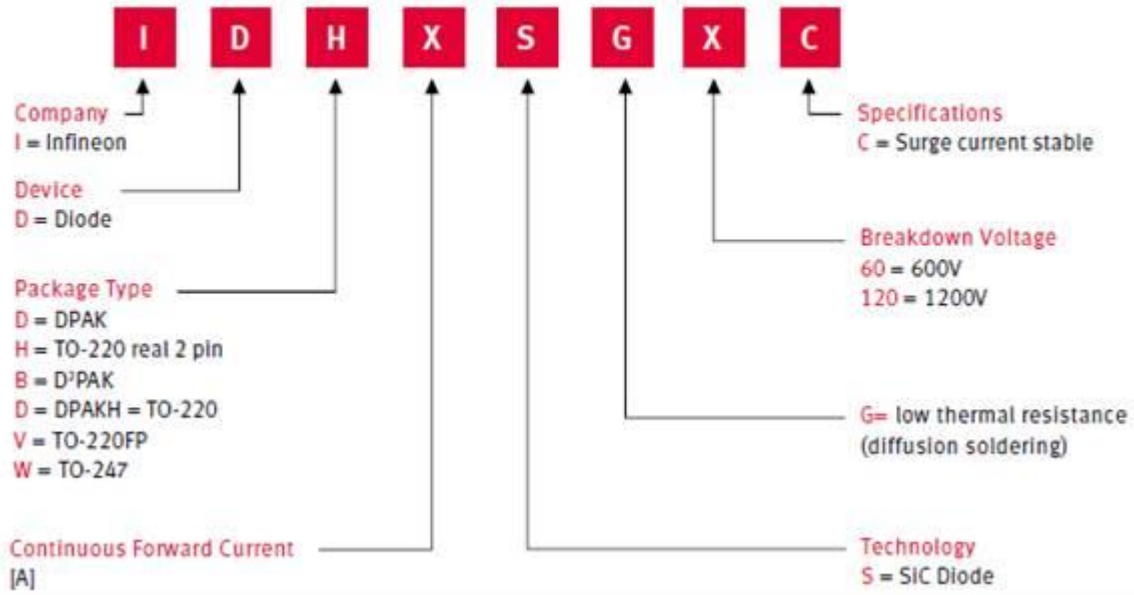

Power MOSFETs (naming system from 2005 onwards)
I P P 60 R 099 C P
Company
I – Infineon
Device
P – Power MOSFET
Package Type
A – TO-220 FullPAK
B – TO-263 (D²PAK)
D – TO-252 (DPAK)
I – TO-262 (I²PAK)
L – ThinPAK 8x8
N – SO-T223
P – TO-220
U – TO-252 (IPAK)
W – TO-247
Series Name
In this case CoolMOS™CP for PFC and PWM applications
R – R
Breakdown Voltage
Divided by 10 (60 x 10 – 600V)


Power MOSFETs (naming system until 2005)
S P P 20 N 60 C 3
Company
S – Formerly Siemens
Device
P – Power MOSFET
Package Type
A – TO-220 FullPAK
B – TO-263 (D²PAK)
D – TO-252 (DPAK)
I – TO-262 (I²PAK)
N – SOT-223
P – TO-220
U – TO-252 (IPAK)
W – TO-247
Z – TO-247-4
Specifications
C3 – CoolMOS™C3
S5 – CoolMOS™S5
Breakdown Voltage
Divided by 10 (60 x 10 – 600V)
Technology
N – N-Channel Transistors
Continuous Drain Current
(@ T_C – 25°C) [A]

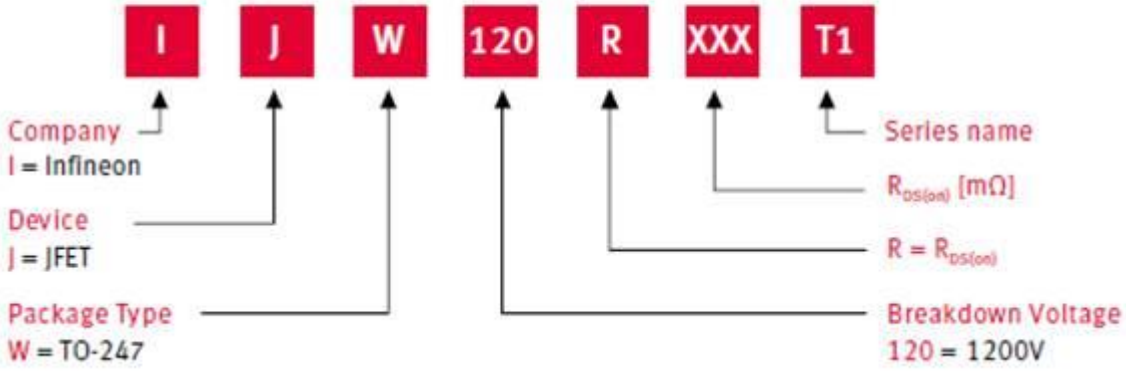
thinQ!™ Silicon Carbide Schottky Diodes Generation 5



thinQ!™ Silicon Carbide Schottky Diodes Generation 2 and 3



CoolSiC™ Silicon Carbide JFET



8. PL 57

8.1. Presspacks

Presspacks

T	1190	N	18	T	O	F	VT	
T								thyristor
D								diode
	1190							maximum average on-state current (A)
	0							medium power ceramic disc
	1							high power ceramic disc
	3							light triggered thyristor disc
		N						phase control device
		K						phase control diode with cathode on case
		S						fast diode
		U						fast diode with cathode on case
		A						avalanche diode with anode on case
		B						avalanche diode with cathode on case
		SH						diode: soft recovery switch-off behavior
			18					maximum repetitive peak off-state and reverse voltage x 100 in V
				B				metric thread with cable
				C				metric thread with solder pin
				E				flat base
				T				disc
					O			no guaranteed turn-off time
								critical rate of off-state voltage
						C		500 V/µs
						F		1000 V/µs
						G		1500 V/µs
						H		2000 V/µs
							VT	on-state voltage class (thyristor) printed on housing
							VF	on-state voltage class (diode) printed on housing
					S01...n			electric selection
					B01...n			constructive variation

8.2. PowerBLOCK Modules

PowerBLOCK Modules								
TT	162	N	16	K	O	F	-K	
TT								with 2 thyristors
DD								with 2 diodes
ND, DZ, TZ								with 1 thyristor or 1 diode
TD, DT								with 1 thyristor and 1 diode
	162							average on state current (A)
		N						phase control device
		S						fast diode
			16					repetitive peak off-state and reverse voltage in 100 V
				K				mechanical construction: module
				A				mechanical construction: module
					O			no guaranteed turn off time
						F		critical rate of rise of off-state voltage (see disc devices)
							-K	design with common cathode
							-A	design with common anode
							B01...n	construction variation
							S01...n	electrical selection

9. PL 58

9.1. TriCore

