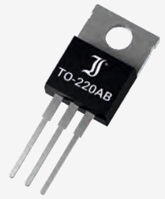
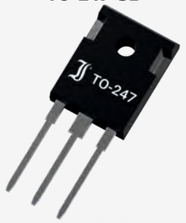
L x W [mm]	6.6 x 6	10.25 x 9	10.25 x 9	8.7 x 10.1	20.9 x 15.9	20.9 x 15.9	20.9 x 15.9	L x W [mm]
Diotec Semiconductor	**TO-252AA** D-PAK	**TO-263AB** D²PAK	**TO-263AB-6L** D²PAK-6L	**TO-220AB**	**TO-247-3L**	**TO-247-PLUS**	**TO-247-4L** Kelvin Source	Diotec Semiconductor
Power								**Power**
	Pitch 2.3	Pitch 5.08	Pitch 1.27	Pitch 2.54	Pitch 5.46	Pitch 5.46	Pitch 5.46	
	N channel / **P channel**	**N channel**	**N channel**	**N channel** / **P channel**	**N channel**	**N channel**	**N channel**	
V_{DS}								
	I_D 2.7 A ... 110 A / -22 A ... -77 A	7.5 ... 350 A	330 A	2.3 A ... 300 A / -74 A	12 A ... 85 A		I_D	
	30/40 DI030N03D1 / **DI040P04D1**	**DI170N04D2**		DIT150N03	DIW085N06		**60**	V_{DS}
	DI087N03D1 / DI050P04D1	DI200N04D2 **DI200N04AD2**		DIT220N04 DIT300N04	DIW300N10		**100**	
	DI100N04D1 / **DI064P04D1**	**DI260N04D2**	DI330N04D7	DIT050N06 DIT074P05	DIW052N60K▼		**600**	
	60/80 DI020N06D1 / **DI068P04D1**	**DI110N06D2**		DIT090N06	DIW012N65		**650**	
	DI050N06D1 / DI022P06D1			DIT184N06	DIW018N65			
	DI074N06D1K▼ / DI077P06D1			DIT072N08	DIW030N65K▼			
	DI110N06D1		▼ These parts include an ESD protection diode between Gate & Source	**DIT080N08**	DIW038N65K▼			
	80 DI065N08D1		Diese Bauteile enthalten eine ESD-Schutzdiode zwischen Gate & Source	DIT095N08				
	100 DI017N10D1	**DI056N10D2**		DIT120N08				
	DI040N10D1	DI200N10D2		DIT195N08	**MOSFETs**			
	DI054N10D1	**DI350N10D2**		**DIT085N10**				
	DI060N10D1		**10.25 x 9**	DIT100N10				
	DI080N10D1		**TO-263AB-7L** D²PAK-7L	DIJ128N10 [1])				
	150/250 DI024N15D1	**DI097N15D2**		DIT015N25	More MOSFETs see page Power MOS			
	150..500 DI014N25D1	**DI198N15D2**		DIT004N50 [1]) in isolated ITO-220				
	DI015N25D1	**DI064N20D2**		DIT005N60				
				DIJ2A3N65 [1])				
	600 DI1A0N60D1			DIJ4A5N65 [1])				
	DI1A5N60D1		Pitch 1.27	DID3A2N65 [2]) [2]) in TO-251				
	DI5A0N60D1		**26 mΩ ... 850 mΩ**		**20 mΩ ... 850 mΩ**		**20 mΩ ... 80 mΩ**	R_{DSon}
	650 DI5A7N65D1K▼	**DI7A5N65D2K▼**	DI065SIC080D7		DIW065SIC015 DIW065SIC049		DIF065SIC020	**650** V_{DS}
	DI018N65D1	**DI015N65D2**		..SIC.. = Silicon Carbide MOSFET	DIW065SIC120 * [QR] DIW065SIC192	* under development; part number subject to be changed [QR]	DIF065SIC030	
	700 DI2A7N70D1K▼						DIF065SIC080	
	800 DI2A2N80D1				**DIW120SIC022** **DIW120SIC023**	[QR] **Roadmap**	**DIF120SIC022 DIF120SIC028**	**1200**
					DIW120SIC028 **DIW120SIC059**		DIF120SIC038 * [QR]	
	1200	DI3A0N120D2	DI120SIC026D7				**DIF120SIC053**	
		Products in bold are available in **AEC-Q101** qualified version – add suffix **-AQ** –	DI120SIC081D7	**SiC MOSFETs**				
	1700		DI170SIC850D7		**DIW170SIC030 * [QR]** DIW170SIC049		**DIF170SIC049**	**1700**
					DIW170SIC070 **DIW170SIC750**	**SiC MOS**		
SiC MOS								**SiC MOS**
[V]								[V]
	5 A			**15 A ... 20 A**	**40 A ... 100 A** / **30 A ... 70 A** / **30 A ... 70 A**	**50 A** / **50 A ... 100 A** / **75 A**	**75 A**	I_D
	Fast	* under development; part number subject to be changed [QR]	**IGBTs**	**Medium** / **Fast**	**reSonant** / **Medium** / **Fast**	**reSonant** / **Medium** / **Fast**	**Fast**	
V_{DS}	**600** DI005F060D1	[QR] **Roadmap**	**Switching Frequency**	DIJ015M065 [1]) DIT020F065	DIW030M060 DIW040F065	DIP075F065 *	DIF075F065	**600/650** V_{CE}
			20 kHz: Re**S**onant		DIW075M065 DIW050F065			
			- Low VCEsat, Inductive Heating		DIW100M065 DIW115F065 *			
			50 kHz: **M**edium	[1]) in isolated ITO-220	DIW040S120 * DIW025F120 *	DIP050S120 * DIP050M120 *		**1200**
			- UPS, Solar Inverter, PTC Heating		DIW040M120 * DIW040F120 *	DIP075M120 *		
			100 kHz: **F**ast		DIW070M120 * DIW030F135	DIP100M120 *		**1200/1350**
		IGBTs	- Drive Inverter, PFC		DIW040F135			
IGBTs								**IGBTs**
[V]								[V]

TO-247-PLUS
Has no mounting hole, allows for bigger die sizes. Clip assembly on heatsink. Lower thermal resistance.

Nomenclature Power MOSFETs:

DI X iii C vv YY

DI = Diotec
X = J - ITO-220AB
T - TO-220AB
W - TO-247-3L
iii = $I_{D(25°C)}$ in A
C = N or P channel
C - Complementary
H - H-Bridge config.
vv = V_{DSS}/10 in V
YY = D1 - D-PAK
D2 - D2PAK
PQ - QFN5x6
PT - QFN3x3
PW - QFN2x2
SQ - SO-8
TL - TOLL

Advantage of Kelvin Source:
+ Faster turn-on
+ Reduced switching losses
+ Lower risk of faulty turn-on
+ Higher reliability

[QR] **App Note**

Onboard Charger

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For complete mechanical and electrical data refer to data sheet