SiliconCarbide Power MOSFETs

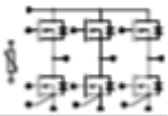
Part Type ✧ under development ➢ New	V_{DSS} V	I_{D25} T_C = 25°C A	I_{D80} T_C = 80°C A	$R_{DS(on)}$ T_C = 25°C mΩ (typ)	C_{iss} typ pF	Q_g typ nC	R_{thJC} K/W	Fig. No.
✧ IXFN 130N90SK [1]	900	136	109	10	4500	68	0.42	X027a
✧ IXFN 27N120SK [1]	1200	27	21.5	80	950	62	1.10	
IXFN 50N120SiC		47	35	40	1900	100	0.55	
IXFN 50N120SK [1]		48	38	40	1895	115	0.60	
✧ MCB 40I1200TZ		60	45	40	1895	115	0.40	X019a
IXFN 70N120SK [1]		68	55	25	2790	160	0.45	X027a
MCB 60I1200TZ		90	70	25	2790	160	0.27	X019a
✧ IXFN 45N170SK [1]	1700	47	35	45	3670	188	0.40	X027a
✧ IXFN 90N170SK [1]		90	67	23	7340	376	0.22	
Phase Leg								
✧ MCB 20P1200LB	1200	22	17.5	80	950	62	1.60	X030a
✧ MCB 25P1200TLB *		32	25.5	80	950	62	0.75	
✧ MCB 30P1200LB		37	29.5	40	1895	115	1.00	
✧ MCB 40P1200LB		58	43	25	2790	160	0.60	
✧ MCB 60P1200TLB *		77	62	25	2790	161	0.35	

[1] Kelvin source gate connection; * NTC added

Package style
Outline drawings
on pages O-31...O-54

X016a ISOPLUS247™

X016c ISO247™

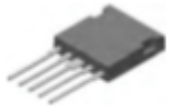


X019a TO-268AAHV

SiC MOSFET 6-pack

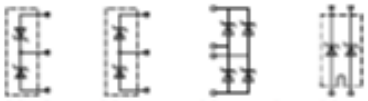
Part Type ✧ under development	V_{DSS} V	I_{D25} T_C = 25°C A	I_{D80} T_C = 80°C A	$R_{DS(on)}$ T_C = 25°C mΩ (typ)	C_{iss} typ pF	Q_g typ nC	R_{thJC} K/W	Fig. No.
✧ MMCB 20WO1200TMI	1200	22	17.5	80	950	62	1.6	X109

X024a ISOPLUS i4-PAC™



SiliconCarbide Schottky Diodes

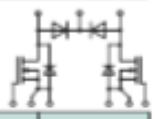
No reverse recovery



Type ✧ Under development ➢ New	V_{RRM} V	I_{FSC} per diode A	I_{FAV} d = 0.5 A	@ T_C °C	V_F typ., T_{VJ} = 175°C V	@ I_F A	R_{thJC} K/W	Fig. No.
Dual								
➢ DCG 45X1200NA	1200	30	2x 22	80	2.20	20	1.10	X027a
➢ DCG 85X1200NA		59	2x 43	80	2.20	40	0.57	
➢ DCG 100X1200NA		66	2x 49	80	2.25	50	0.51	
➢ DCG 130X1200NA		88	2x 64	80	2.30	60	0.39	
Common Cathode								
✧ DCG 20C1200HR	1200	13	2x 10	80	2.20	10	3.0	X016c
✧ DCG 35C1200HR		23	2x 17	80	2.20	20	1.8	
Phase Leg								
✧ DCG 10P1200HR	2x 1200	13	10	80	2.20	10	3.0	X016c
✧ DCG 17P1200HR		23	17	80	2.20	20	1.8	
Full Bridge								
➢ DCG 20B650LB	650	16	10.5	80	2.0	10	2.1	X030a
FBS 10-12SC	1200		4.5	80	2.6	5	7.0	X024a
✧ DCG 20B1200LB		12.5	9.2	80	2.0	20	3.3	X030a

X027a SOT-227B miniBLOC

X030a SMPD-B



Double Boost

X109 MiniPack 2B

Type ➢ New	Circuit and Technology	V_{DSS} max V	I_{D80} T_C = 80°C A	$R_{DS(on)}$ max Ω	I_{FSC} Boost Diode A	Fig. No.
➢ MKH 17RP650DCGLB	Superjunction [1] MOSFET C + SiC	650	2 x 16	0.11	2 x 16	X030a

[1] Powered by Infineon CoolMOS™ superjunction bare die C6