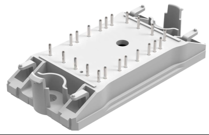
flow SOL 0 BI **600 V / 30 A**

Features

- High efficiency
- Ultra fast switching frequency
- Low inductive design
- SiC in boost

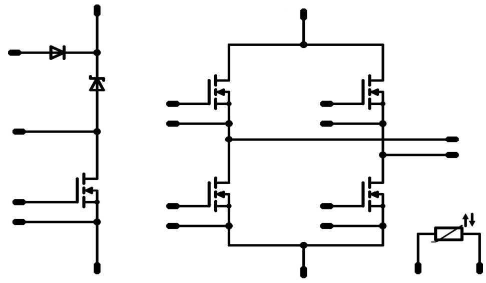
flow 0 12 mm housing



Target Applications

- Solar inverters with transformer

Schematic



Types

- 10-FZ06BIA083FI-P896E

Maximum Ratings

T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Condition		Value	Unit
ByPass Diode					
Repetitive peak reverse voltage	V_{RRM}			600	V
Forward current	I_{FAV}	DC current	T_s = 80 °C	36	A
Surge (non-repetitive) forward current	I_{FSM}	t_p = 10 ms	T_j = 150 °C	270	A
I^2t-value	I^2t			370	A^2s
Power dissipation	P_{tot}	$T_j = T_{jmax}$	T_s = 80 °C	42	W
Maximum Junction Temperature	T_{jmax}			150	°C
Input Boost Switch					
Drain to source breakdown voltage	V_{DS}			600	V
DC drain current	I_D	$T_j = T_{jmax}$	T_s = 80 °C	33	A
Pulsed drain current	I_{Dpulse}	t_p limited by T_{jmax}		230	A
Power dissipation	P_{tot}	$T_j = T_{jmax}$	T_s = 80 °C	114	W
Gate-source peak voltage	V_{GSS}			±20	V
Maximum Junction Temperature	T_{jmax}			150	°C

Maximum Ratings

T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Condition		Value	Unit
Input Boost Diode					
Peak Repetitive Reverse Voltage	V_{RRM}			650	V
DC forward current	I_F	$T_j = T_{jmax}$	T_s = 80 °C	24	A
Repetitive peak forward current	I_{FRM}	t_p limited by T_{jmax}		70	A
Power dissipation	P_{tot}	$T_j = T_{jmax}$	T_s = 80 °C	48	W
Maximum Junction Temperature	T_{jmax}			175	°C
H-Bridge Switch					
Drain to source breakdown voltage	V_{DS}			600	V
DC drain current	I_D	$T_j = T_{jmax}$	T_s = 80 °C	18	A
Pulsed drain current	I_{Dpulse}	t_p limited by T_{jmax}	T_c = 25 °C	85	A
Power dissipation	P_{tot}	$T_j = T_{jmax}$	T_s = 80 °C	90	W
Gate-source peak voltage	V_{GSS}			±20	V
Maximum Junction Temperature	T_{jmax}			150	°C
Thermal Properties					
Storage temperature	T_{stg}			-40…+125	°C
Operation temperature under switching condition	T_{op}			-40…+(T_{jmax} - 25)	°C
Insulation Properties					
Insulation voltage	V_{is}	t = 2 s	DC Test Voltage*	6000	V
		t = 1 min	AC voltage	2500	V
Creepage distance				min 12,7	mm
Clearance				8,66	mm

*100 % tested in production

Characteristic Values

Parameter	Symbol	Conditions					Value			Unit
			V_{GE} [V] V_{GS} [V]	V_r [V] V_{CE} [V] V_{DS} [V]	I_C [A] I_F [A] I_D [A]	T_j [°C]	Min	Typ	Max	
ByPass Diode										
Forward voltage	V_F				15	25 125	0,7	1,01 0,93	1,3	V
Threshold voltage (for power loss calc. only)	V_{to}					25 125		0,86 0,75		V
Slope resistance (for power loss calc. only)	r_t					125		0,012		Ω
Reverse current	I_r			1600		25			0,05	mA
Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material λ = 3,4 W/mK						1,27		K/W
Input Boost Switch										
Static drain to source ON resistance	$r_{DS(on)}$		10		44	25 125		40 90		mΩ
Gate threshold voltage	$V_{(GS)th}$	$V_{GS} = V_{DS}$			0,003	25	2,1	3	3,9	V
Gate to Source Leakage Current	I_{GSS}		20	0		25			200	nA
Zero Gate Voltage Drain Current	I_{DSS}		0	600		25			25	µA
Turn On Delay Time	$t_{d(on)}$	R_{goff} = 4 Ω R_{gon} = 4 Ω	10	400	15	25 125		28 27		ns
Rise Time	t_r					25 125		5 6		
Turn off delay time	$t_{d(off)}$					25 125		154 167		
Fall time	t_f					25 125		10 9		
Turn-on energy loss	E_{on}					25 125		0,063 0,072		mWs
Turn-off energy loss	E_{off}					25 125		0,025 0,025		
Total gate charge	Q_G		10	400	44	25		150		nC
Gate to source charge	Q_{GS}					25		34		
Gate to drain charge	Q_{GD}					25		51		
Input capacitance	C_{iss}	f = 1 MHz	0	100		25		6800		pF
Output capacitance	C_{oss}							320		
Reverse transfer capacitance	C_{rss}							48		
Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material λ = 3,4 W/mK						0,61		K/W
Input Boost Diode										
Forward voltage	V_F				16	25 150		1,35 1,55	1,55	V
Reverse leakage current	I_{rm}			600		25 150		3,2 48	320	µA
Peak recovery current	I_{RRM}	R_{gon} = 4 Ω	10	400	15	25 150		17 15		A
Reverse recovery time	t_{rr}					25 150		9 10		ns
Reverse recovery charge	Q_{rr}					25 150		0,058 0,064		µC
Reverse recovered energy	E_{rec}					25 150		0,005 0,006		mWs
Peak rate of fall of recovery current	$(di_{rf}/dt)_{max}$					25 150		4244 2752		A/µs
Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material λ = 3,4 W/mK						1,99		K/W

Characteristic Values

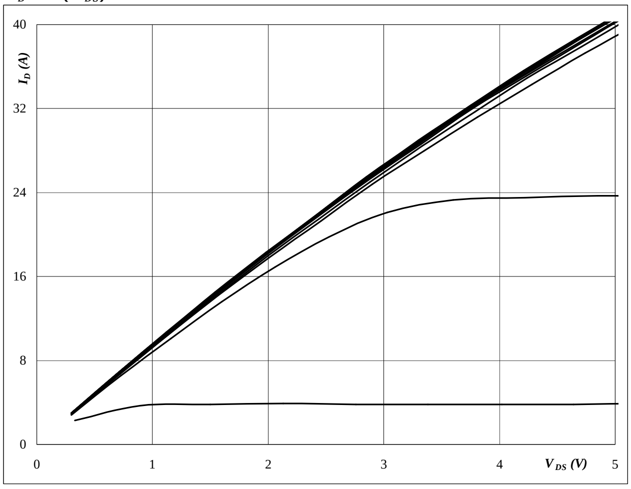
Parameter	Symbol	Conditions	V_{GE} [V] V_{GS} [V]	V_r [V] V_{CE} [V] V_{DS} [V]	I_C [A] I_F [A] I_D [A]	T_j [°C]	Min	Typ	Max	Unit
H-Bridge Switch										
Static drain to source ON resistance	$r_{DS(on)}$		10		21,6	25 125		118 233		mΩ
Gate threshold voltage	$V_{GS(th)}$		$V_{DS} = V_{GS}$		0,0019	25	3	4	5	V
Gate to Source Leakage Current	I_{GSS}		20	0		25			200	nA
Zero Gate Voltage Drain Current	I_{DSS}		0	600		25			25	µA
Turn On Delay Time	$t_{d(on)}$	$R_{gon} = 16\ \Omega$ $R_{goff} = 4\ \Omega$	10	400	15	25 125		58 55		ns
Rise Time	t_r					25 125		22 23		
Turn off delay time	$t_{d(off)}$					25 125		126 134		
Fall time	t_f					25 125		6 8		
Turn-on energy loss	E_{on}					25 125		1,54 2,27		mWs
Turn-off energy loss	E_{off}					25 125		0,01 0,02		
Total gate charge	Q_G		10	480	34,1	25		163		nC
Gate to source charge	Q_{GS}							36		
Gate to drain charge	Q_{GD}							87		
Input capacitance	C_{iss}	f = 1 MHz	0	25		25		5060		pF
Output capacitance	C_{oss}							1400		
Reverse transfer capacitance	C_{rss}							52		
Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material λ = 3,4 W/mK						0,78		K/W
Thermistor										
Rated resistance	R					25		22		kΩ
Power dissipation	P					25		5		mW
Power dissipation constant						25		1,5		mW/K
B-value	$B_{(25/50)}$					25		3962		K
B-value	$B_{(25/100)}$					25		4000		K
Vincotech NTC Reference									I	

Half-Bridge

figure 1. **MOSFET**

Typical output characteristics

$I_D = f(V_{DS})$



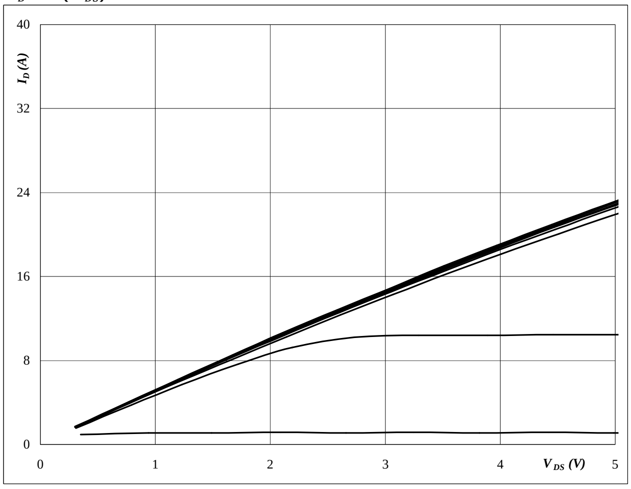
At

t_p = 250 µs
T_j = 25 °C
V_{GS} from 6 V to 16 V in steps of 1 V

figure 2. **MOSFET**

Typical output characteristics

$I_D = f(V_{DS})$



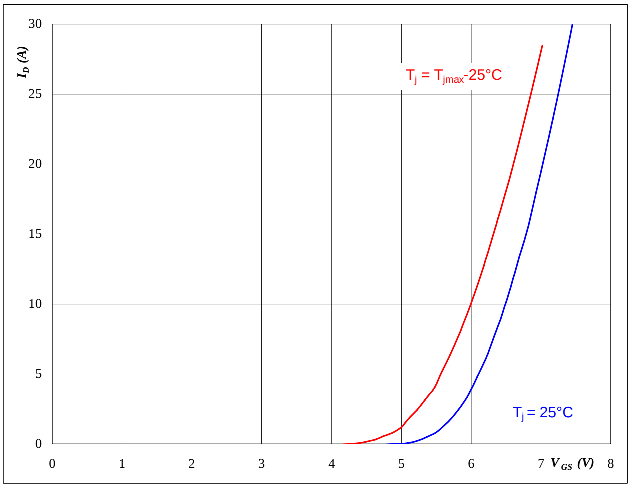
At

t_p = 250 µs
T_j = 125 °C
V_{GS} from 6 V to 16 V in steps of 1 V

figure 3. **MOSFET**

Typical transfer characteristics

$I_D = f(V_{GS})$



At

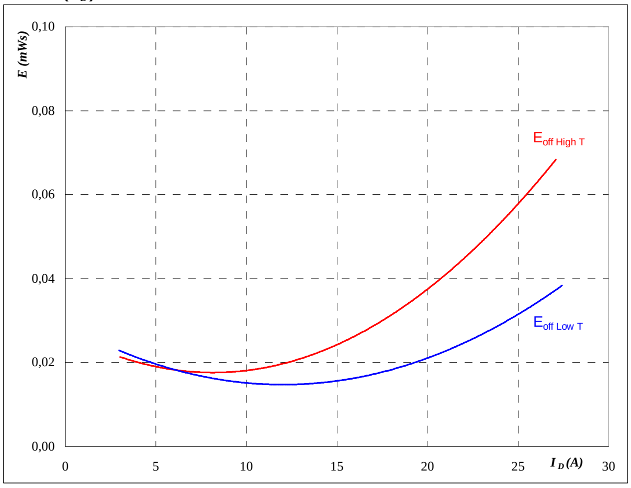
t_p = 250 µs
V_{DS} = 10 V

Half-Bridge

figure 4.	**MOSFET**

Typical switching energy losses as a function of drain current

$E = f(I_D)$



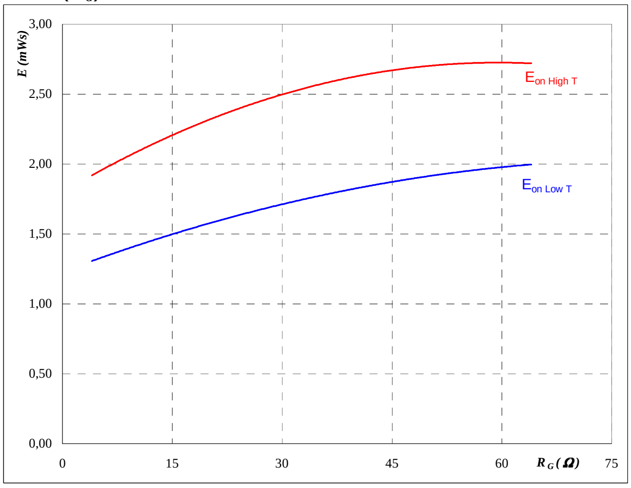
With an inductive load at

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	16	Ω
R_{goff} =	4	Ω

figure 5.	**MOSFET**

Typical switching energy losses as a function of gate resistor

$E = f(R_G)$



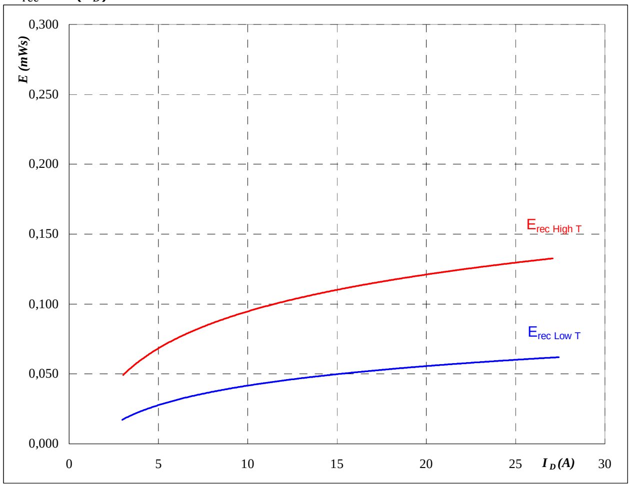
With an inductive load at

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
I_D =	15	A

figure 6.	**FWD**

Typical reverse recovery energy loss as a function of drain current

$E_{rec} = f(I_D)$



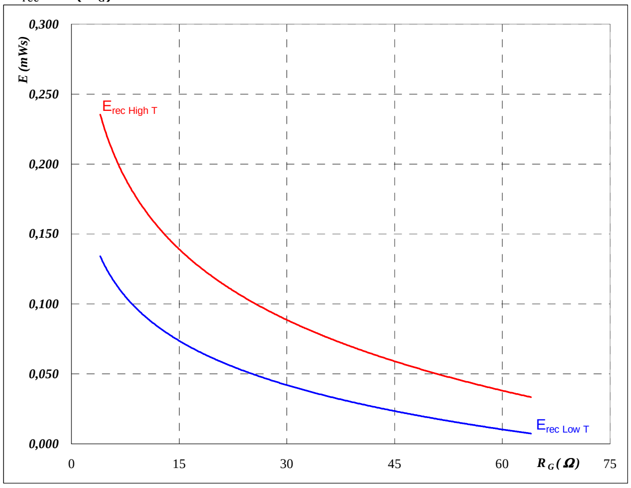
With an inductive load at

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	16	Ω

figure 7.	**FWD**

Typical reverse recovery energy loss as a function of gate resistor

$E_{rec} = f(R_G)$



With an inductive load at

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
I_D =	15	A

Vincotech

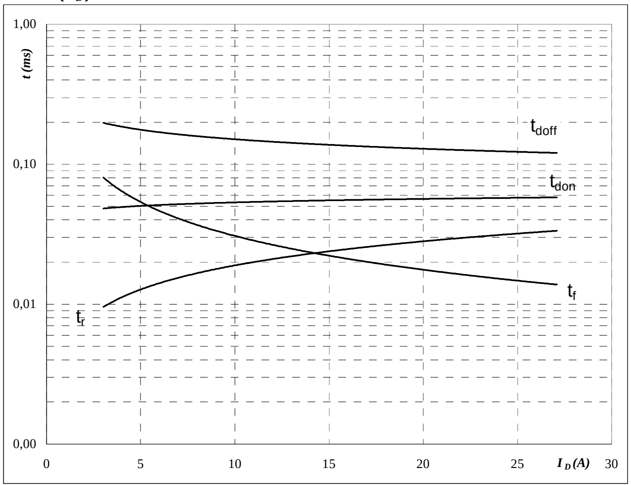
10-FZ06BIA083FI-P896E
datasheet

Half-Bridge

figure 8. **MOSFET**

Typical switching times as a as a function of drain current

$t = f(I_D)$



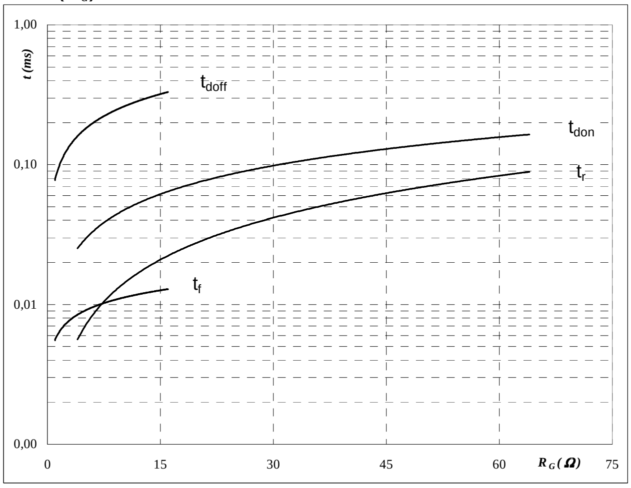
With an inductive load at

T_j =	125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	16	Ω
R_{goff} =	4	Ω

figure 9. **MOSFET**

Typical switching times as a function of gate resistor

$t = f(R_G)$



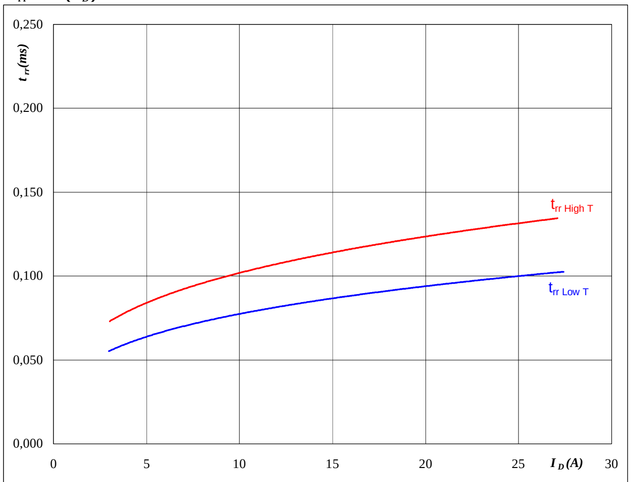
With an inductive load at

T_j =	125	°C
V_{DS} =	400	V
V_{GS} =	10	V
I_D =	15	A

figure 10. **FWD**

Typical reverse recovery time as a as a function of drain current

$t_{rr} = f(I_D)$



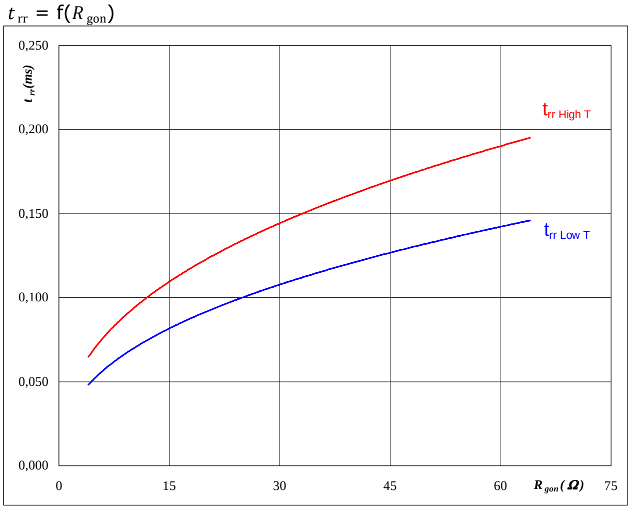
At

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	16	Ω

figure 11. **FWD**

Typical reverse recovery time as a function of MOSFET turn on gate resistor

$t_{rr} = f(R_{gon})$



At

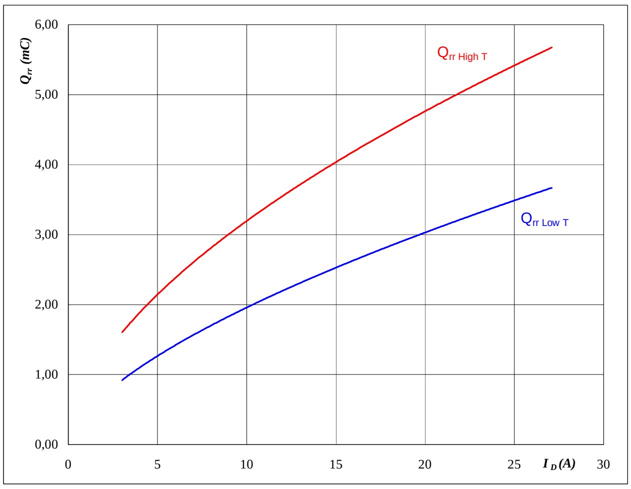
T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

Half-Bridge

figure 12. **FWD**

Typical reverse recovery charge as a as a function of drain current

$Q_{rr} = f(I_D)$



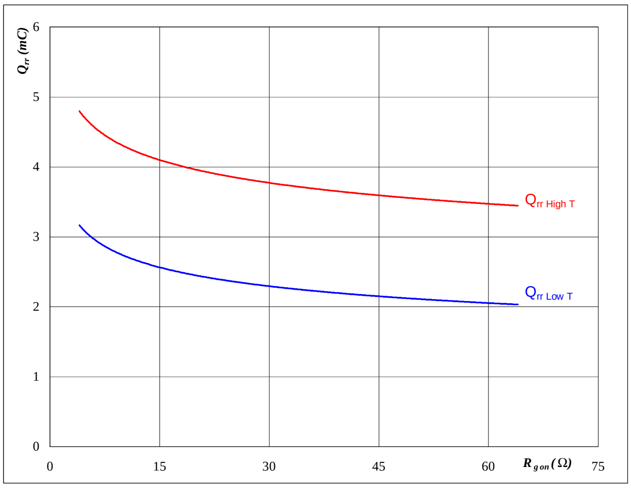
At

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	16	Ω

figure 13. **FWD**

Typical reverse recovery charge as a function of MOSFET turn on gate resistor

$Q_{rr} = f(R_{gon})$



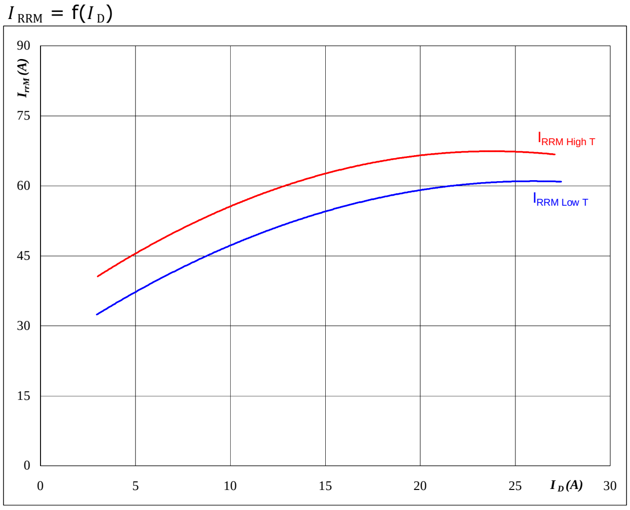
At

T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

figure 14. **FWD**

Typical reverse recovery current as a as a function of drain current

$I_{RRM} = f(I_D)$



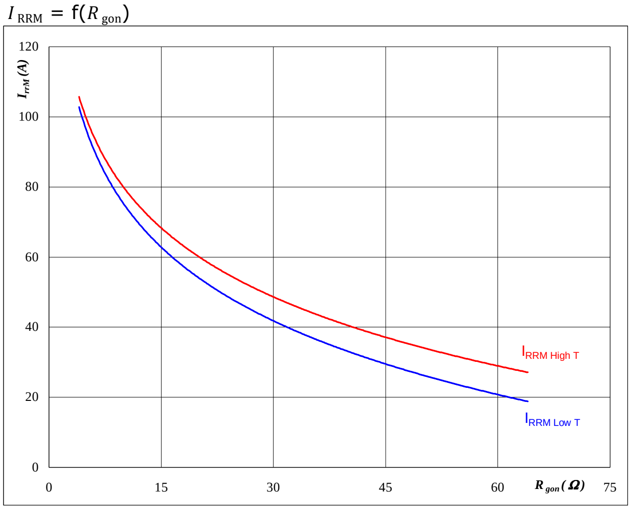
At

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	16	Ω

figure 15. **FWD**

Typical reverse recovery current as a function of MOSFET turn on gate resistor

$I_{RRM} = f(R_{gon})$



At

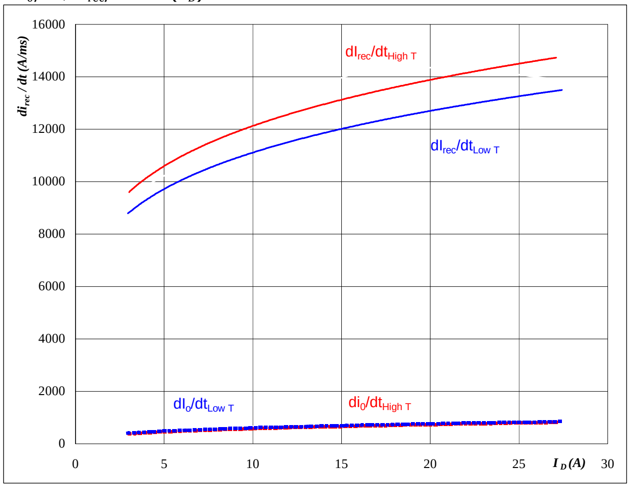
T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

Half-Bridge

figure 16. **FWD**

Typical rate of fall of forward and reverse recovery current as a as a function of drain current

$dI_0/dt, dI_{rec}/dt = f(I_D)$



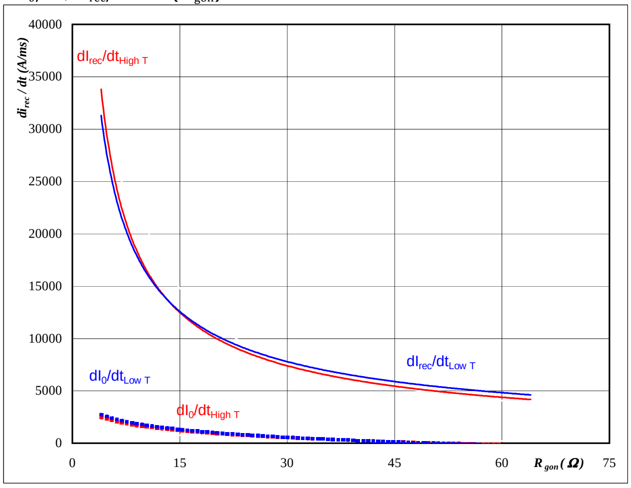
At

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	16	Ω

figure 17. **FWD**

Typical rate of fall of forward and reverse recovery current as a function of MOSFET turn on gate resistor

$dI_0/dt, dI_{rec}/dt = f(R_{gon})$



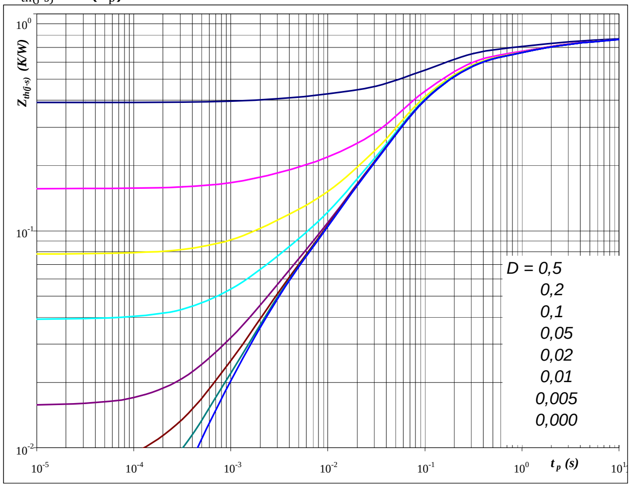
At

T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

figure 18. **MOSFET**

MOSFET transient thermal impedance as a function of pulse width

$Z_{th(j-s)} = f(t_p)$



At

D =	t_p / T	
$R_{th(j-s)}$ =	0,78	K/W

IGBT thermal model values

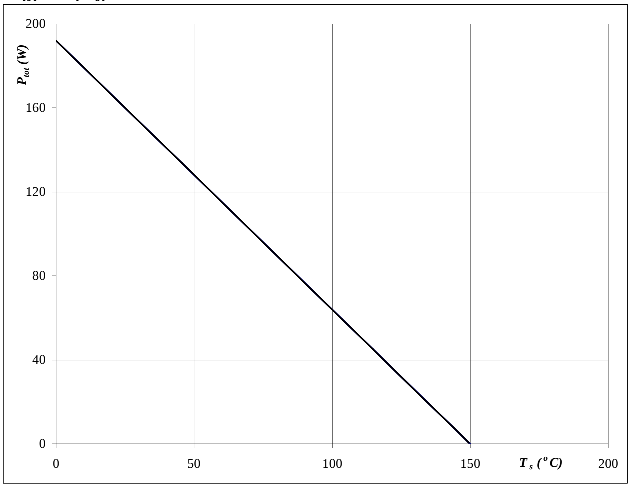
R (K/W)	Tau (s)
7,38E-02	7,08E+00
1,29E-01	1,15E+00
2,92E-01	1,52E-01
2,38E-01	5,48E-02
3,81E-02	4,07E-03
1,07E-02	1,33E-03

Half-Bridge

figure 19. **MOSFET**

Power dissipation as a function of heatsink temperature

$P_{tot} = f(T_s)$



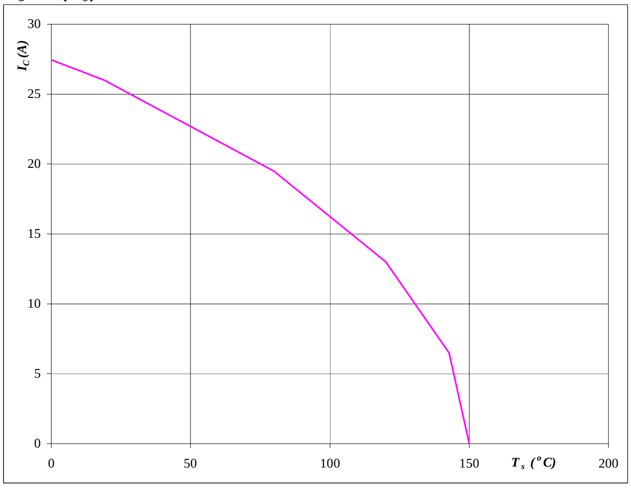
At

T_j = 150 °C

figure 20. **MOSFET**

Collector current as a function of heatsink temperature

$I_C = f(T_s)$



At

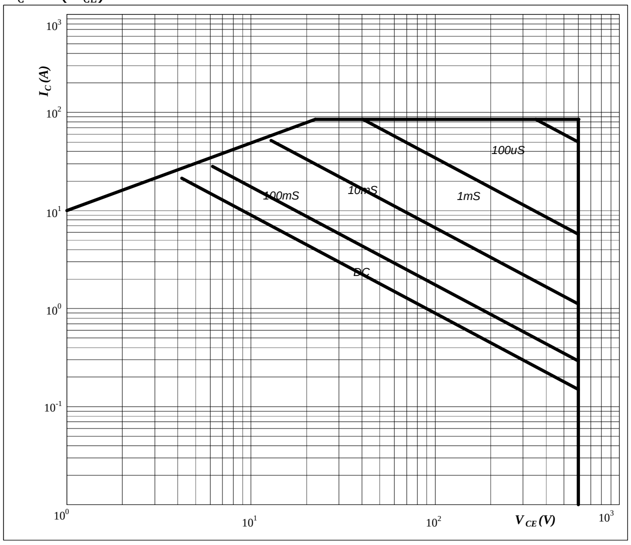
T_j = 150 °C

V_{GE} = 15 V

figure 21. **MOSFET**

Safe operating area as a function of collector-emitter voltage

$I_C = f(V_{CE})$



At

D = single pulse

T_s = 80 ºC

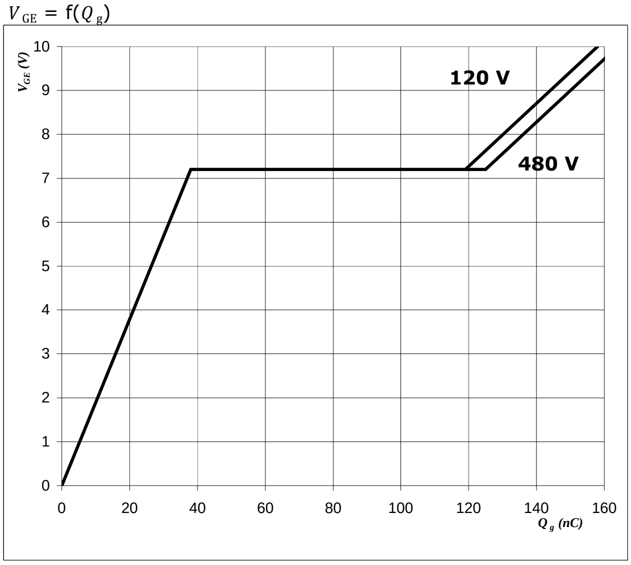
V_{GE} = 15 V

T_j = T_{jmax}

figure 22. **MOSFET**

Gate voltage vs Gate charge

$V_{GE} = f(Q_g)$



At

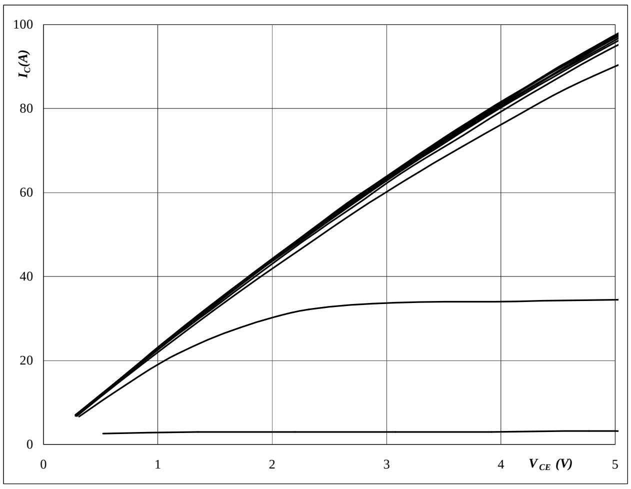
I_D = 34 A

Input Boost

figure 1. **MOSFET**

Typical output characteristics

$I_D = f(V_{DS})$



At

t_p = 250 µs

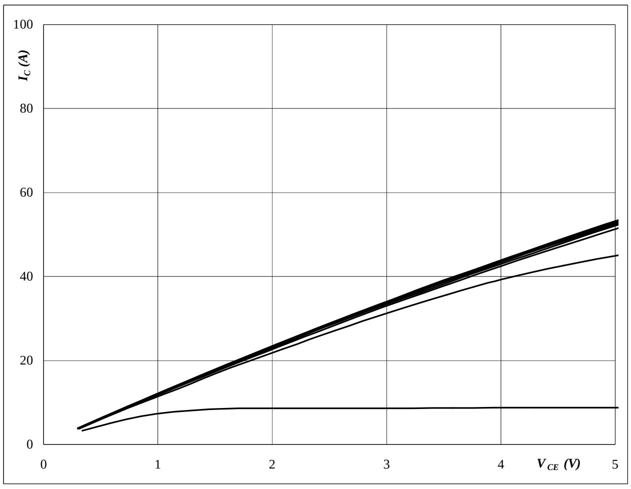
T_j = 25 °C

V_{GS} from 4 V to 14 V in steps of 1 V

figure 2. **MOSFET**

Typical output characteristics

$I_D = f(V_{DS})$



At

t_p = 250 µs

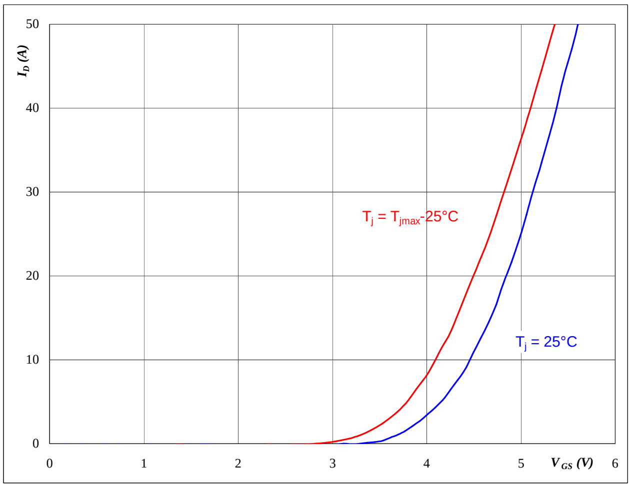
T_j = 126 °C

V_{GS} from 4 V to 14 V in steps of 1 V

figure 2. **MOSFET**

Typical transfer characteristics

$I_D = f(V_{DS})$



At

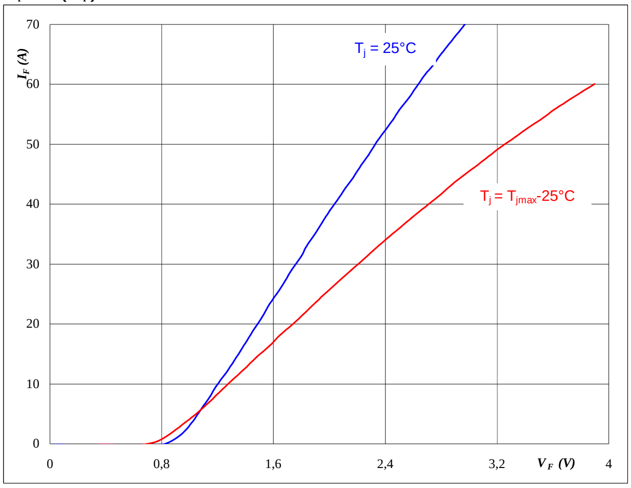
t_p = 250 µs

V_{DS} = 10 V

figure 3. **FWD**

Typical FWD forward current as a function of forward voltage

$I_F = f(V_F)$



At

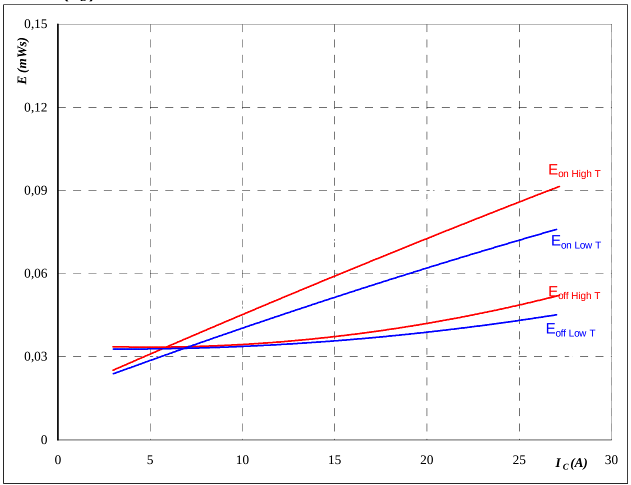
t_p = 250 µs

Input Boost

figure 4. **MOSFET**

Typical switching energy losses as a function of collector current

$E = f(I_D)$



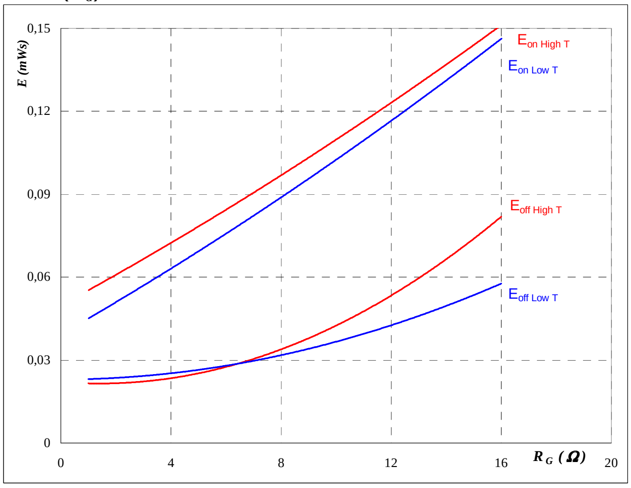
With an inductive load at

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	4	Ω
R_{goff} =	4	Ω

figure 5. **MOSFET**

Typical switching energy losses as a function of gate resistor

$E = f(R_G)$



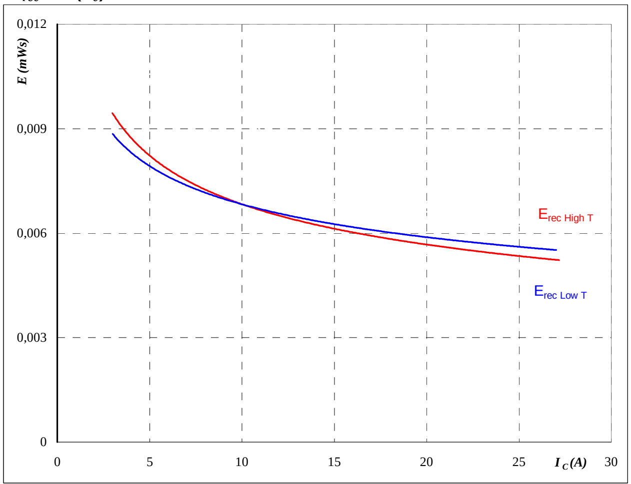
With an inductive load at

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
I_D =	15	A

figure 6. **MOSFET**

Typical reverse recovery energy loss as a function of collector (drain) current

$E_{rec} = f(I_c)$



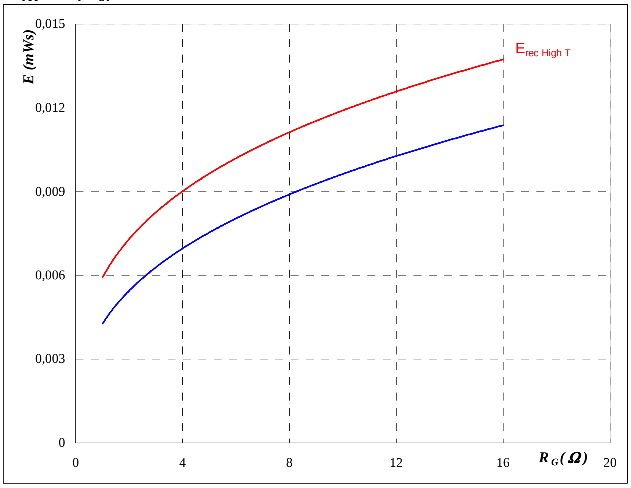
With an inductive load at

T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	4	Ω
R_{goff} =	4	Ω

figure 7. **MOSFET**

Typical reverse recovery energy loss as a function of gate resistor

$E_{rec} = f(R_G)$



With an inductive load at

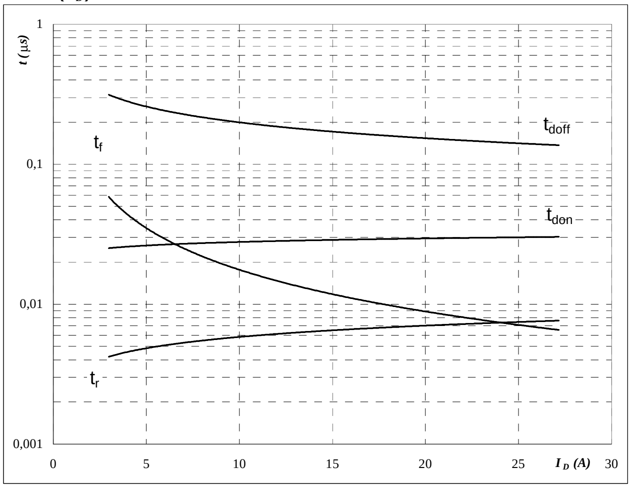
T_j =	25/125	°C
V_{DS} =	400	V
V_{GS} =	10	V
I_D =	15	A

Input Boost

figure 8. **MOSFET**

Typical switching times as a function of collector current

$t = f(I_D)$



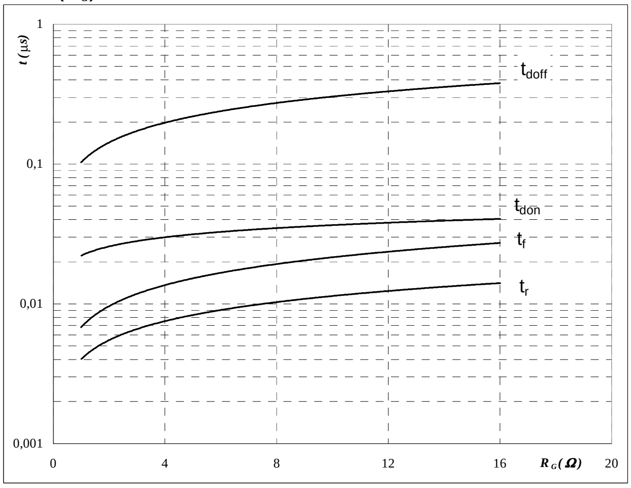
With an inductive load at

T_j =	125	°C
V_{DS} =	400	V
V_{GS} =	10	V
R_{gon} =	4	Ω
R_{goff} =	4	Ω

figure 9. **MOSFET**

Typical switching times as a function of gate resistor

$t = f(R_G)$



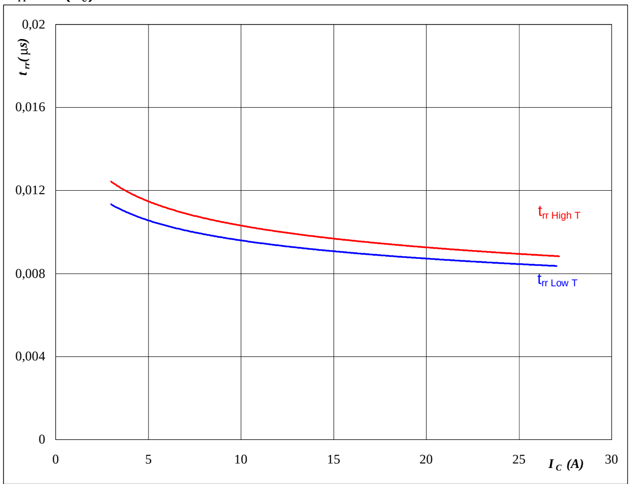
With an inductive load at

T_j =	125	°C
V_{DS} =	400	V
V_{GS} =	10	V
I_C =	15	A

figure 10. **FWD**

Typical reverse recovery time as a function of collector current

$t_{rr} = f(I_c)$



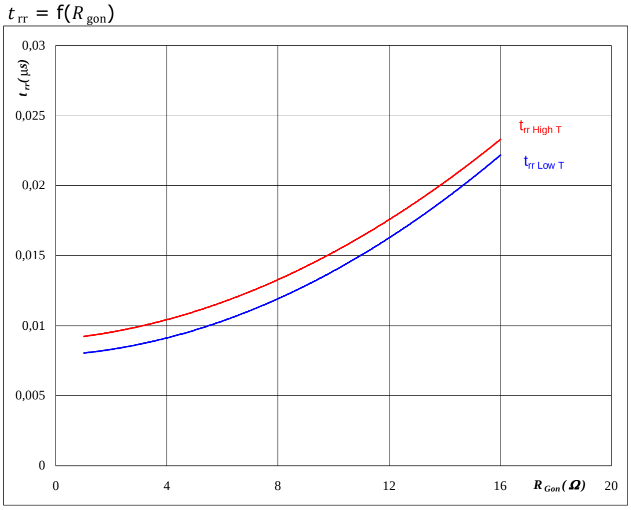
At

T_j =	25/125	°C
V_{CE} =	400	V
V_{GE} =	10	V
R_{gon} =	4	Ω

figure 11. **FWD**

Typical reverse recovery time as a function of MOSFET turn on gate resistor

$t_{rr} = f(R_{gon})$



At

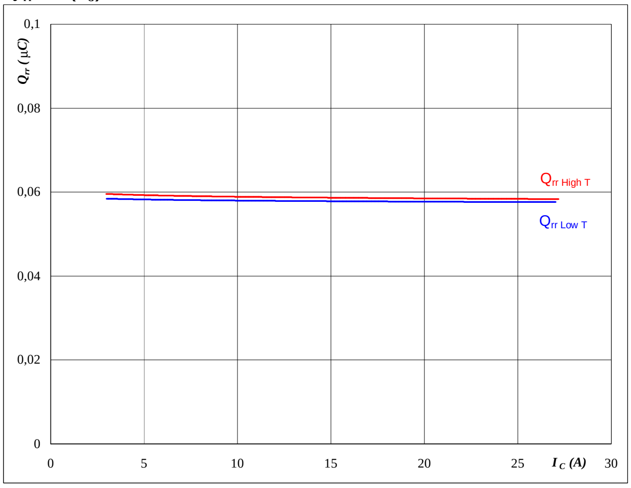
T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

Input Boost

figure 12. **FWD**

Typical reverse recovery charge as a function of collector current

$Q_{rr} = f(I_C)$



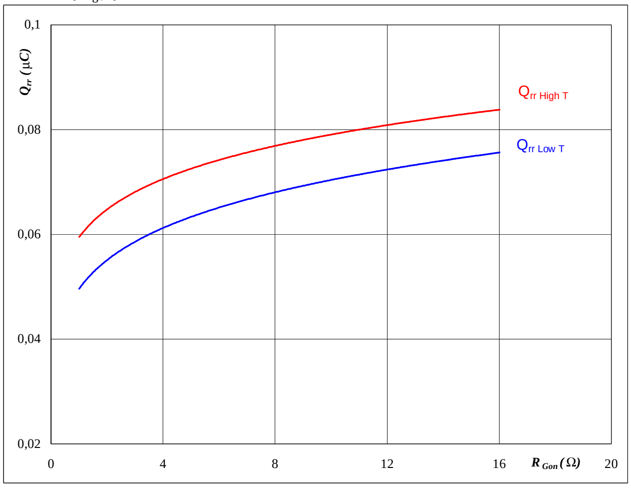
At

T_j =	25/125	°C
V_{CE} =	400	V
V_{GE} =	10	V
R_{gon} =	4	Ω

figure 13. **FWD**

Typical reverse recovery charge as a function of MOSFET turn on gate resistor

$Q_{rr} = f(R_{gon})$



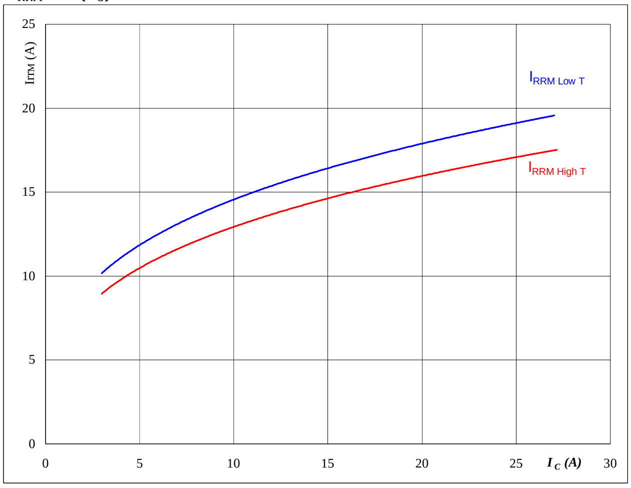
At

T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

figure 14. **BOOST FWD**

Typical reverse recovery current as a function of collector current

$I_{RRM} = f(I_C)$



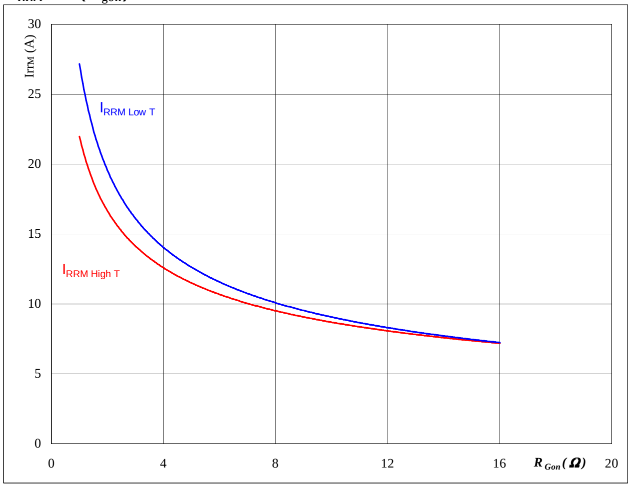
At

T_j =	25/125	°C
V_{CE} =	400	V
V_{GE} =	10	V
R_{gon} =	4	Ω

figure 15. **BOOST FWD**

Typical reverse recovery current as a function of IGBT turn on gate resistor

$I_{RRM} = f(R_{gon})$



At

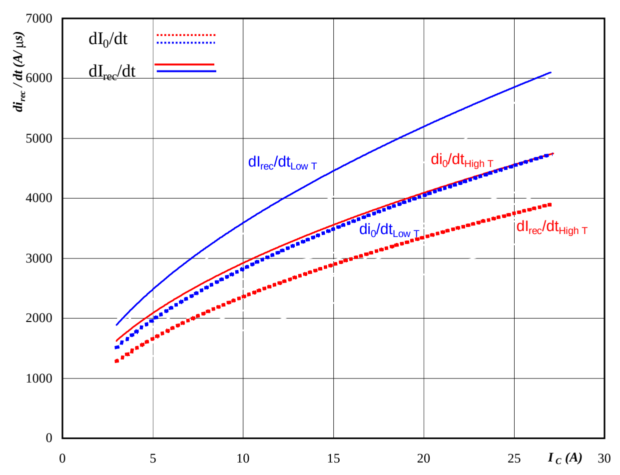
T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

Input Boost

figure 16. **FWD**

Typical rate of fall of forward and reverse recovery current as a function of collector current

$dI_0/dt, dI_{rec}/dt = f(I_c)$



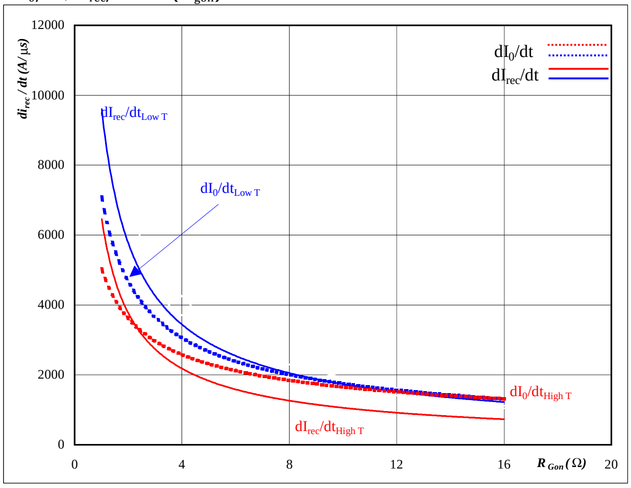
At

T_j =	25/125	°C
V_{CE} =	400	V
V_{GE} =	10	V
R_{gon} =	4	Ω

figure 17. **FWD**

Typical rate of fall of forward and reverse recovery current as a function of IGBT turn on gate resistor

$dI_0/dt, dI_{rec}/dt = f(R_{gon})$



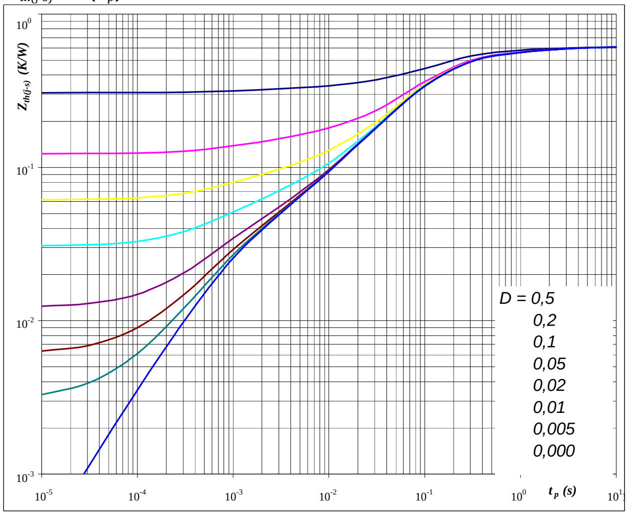
At

T_j =	25/125	°C
V_R =	400	V
I_F =	15	A
V_{GS} =	10	V

figure 18. **MOSFET**

IGBT/MOSFET transient thermal impedance as a function of pulse width

$Z_{th(j-s)} = f(t_p)$



At

D =	t_p / T	
$R_{th(j-s)}$ =	0,61	K/W

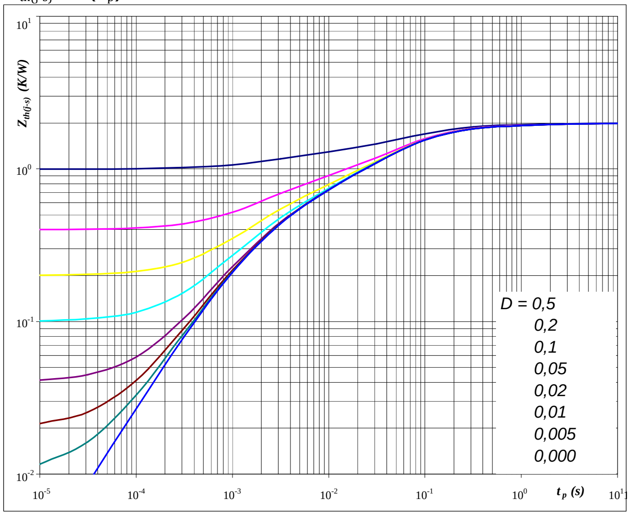
IGBT thermal model values

R (K/W)	Tau (s)
3,15E-02	4,91E+00
7,53E-02	9,33E-01
2,37E-01	1,69E-01
2,14E-01	6,38E-02
3,20E-02	6,71E-03
2,42E-02	8,90E-04

figure 19. **FWD**

FWD transient thermal impedance as a function of pulse width

$Z_{th(j-s)} = f(t_p)$



At

D =	t_p / T	
$R_{th(j-s)}$ =	1,99	K/W

FWD thermal model values

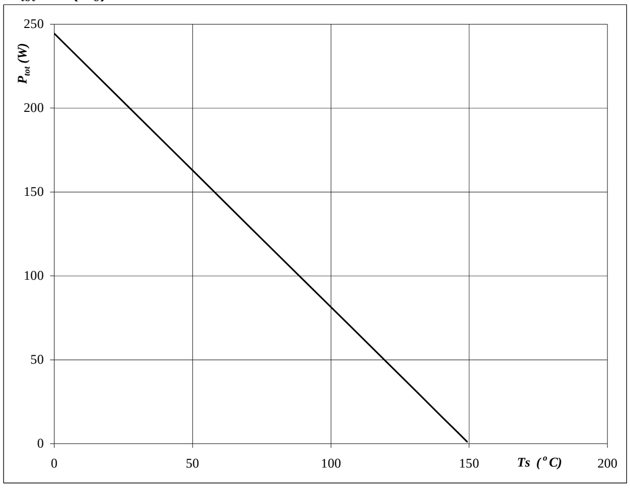
R (K/W)	Tau (s)
7,15E-02	3,22E+00
1,44E-01	4,88E-01
7,05E-01	9,20E-02
4,90E-01	3,29E-02
3,16E-01	6,07E-03

Input Boost

figure 20. **MOSFET**

Power dissipation as a function of heatsink temperature

$P_{tot} = f(T_s)$



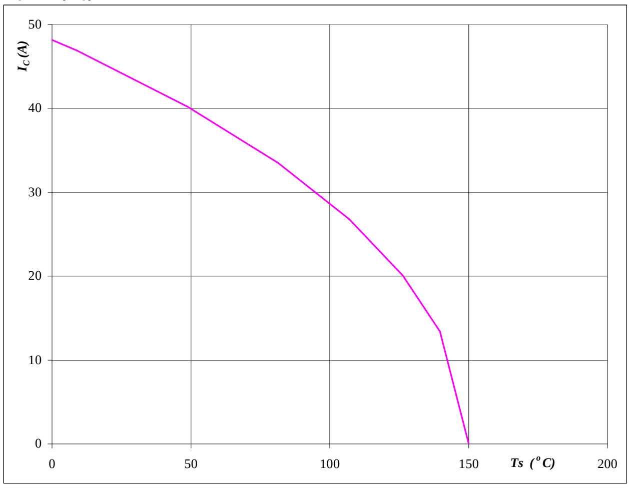
At

T_j = 150 ºC

figure 21. **BOOST MOSFET**

Collector/Drain current as a function of heatsink temperature

$I_C = f(T_s)$



At

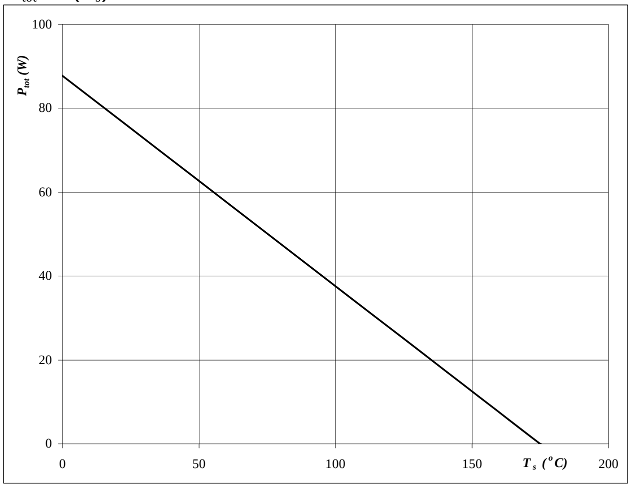
T_j = 150 ºC

V_{GS} = 10 V

figure 22. **FWD**

Power dissipation as a function of heatsink temperature

$P_{tot} = f(T_s)$



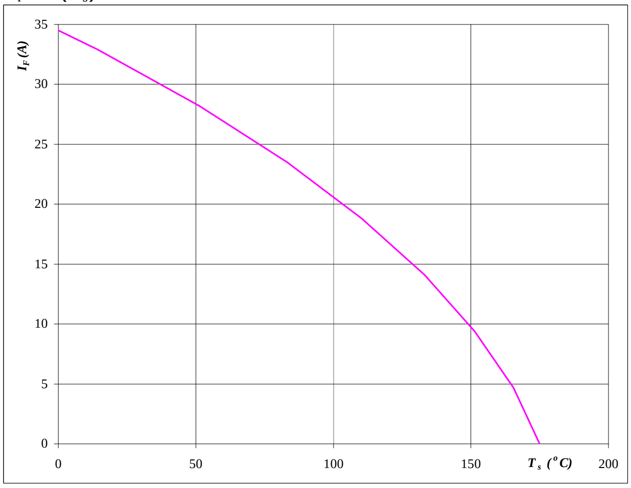
At

T_j = 175 ºC

figure 23. **FWD**

Forward current as a function of heatsink temperature

$I_F = f(T_s)$



At

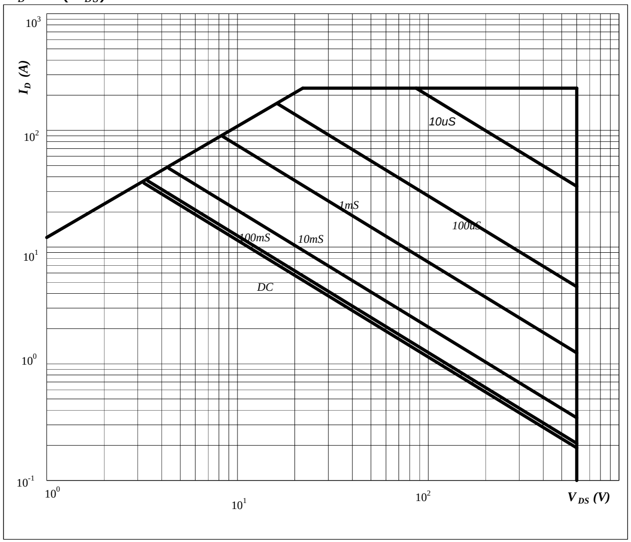
T_j = 175 ºC

Input Boost

figure 24. **MOSFET**

Safe operating area as a function of drain-source voltage

$I_D = f(V_{DS})$



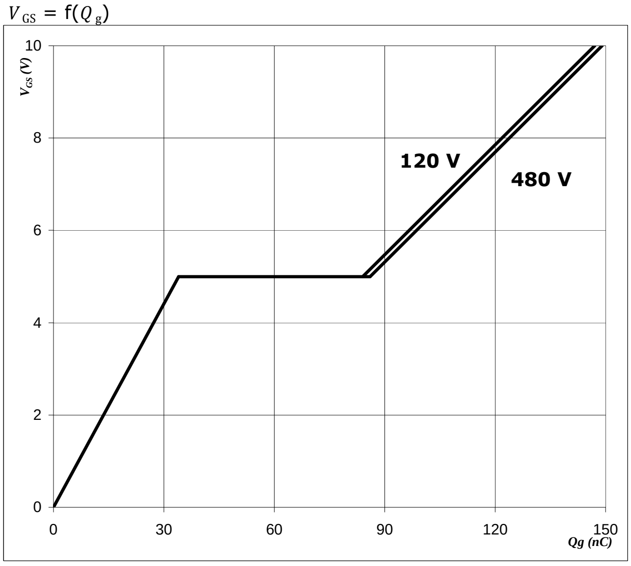
At

D =	single pulse	
T_s =	80	ºC
V_{GS} =	10	V
T_j =	T_{jmax}	

figure 25. **MOSFET**

Gate voltage vs Gate charge

$V_{GS} = f(Q_g)$



At

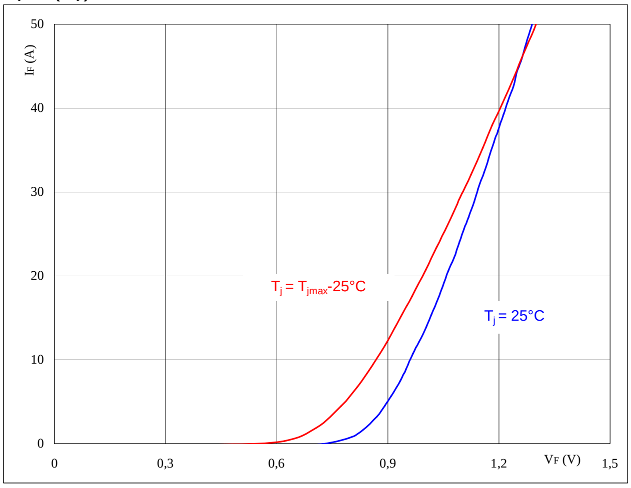
I_D =	44	A

Bypass Diode

figure 1. **Diode**

Typical FWD forward current as a function of forward voltage

$I_F = f(V_F)$



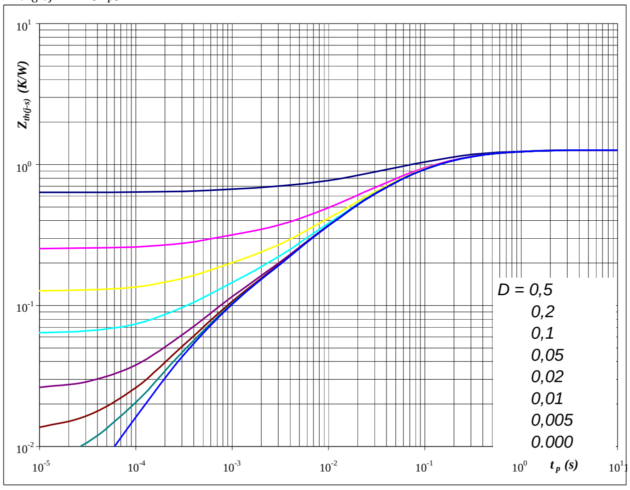
At

t_p = 250 µs

figure 2. **Diode**

FWD transient thermal impedance as a function of pulse width

$Z_{th(j\text{-}s)} = f(t_p)$



At

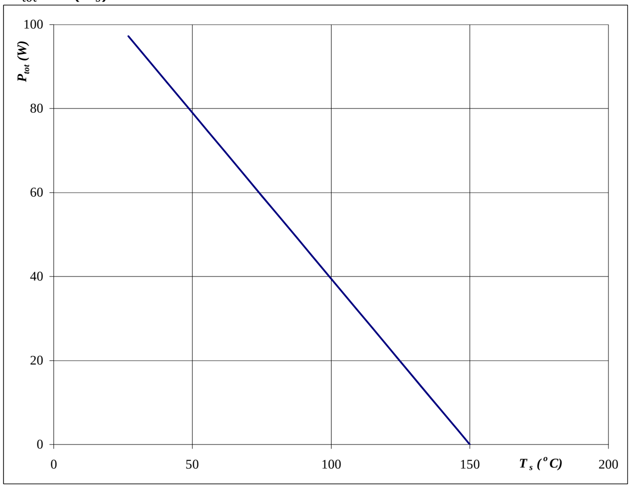
D = t_p / T

$R_{th(j\text{-}s)}$ = 1,266 K/W

figure 3. **Diode**

Power dissipation as a function of heatsink temperature

$P_{tot} = f(T_s)$



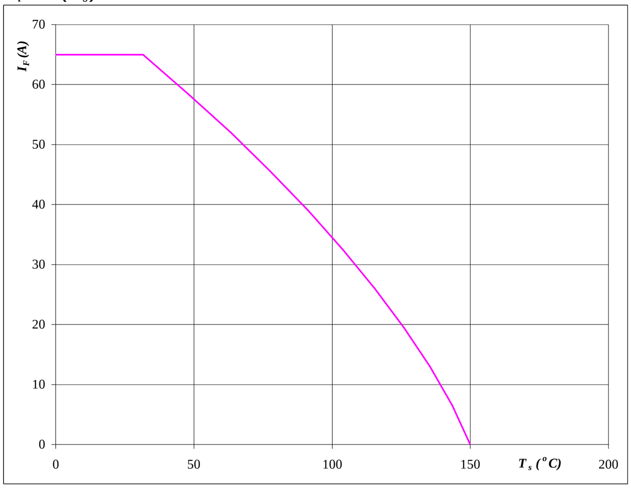
At

T_j = 150 ºC

figure 4. **Diode**

Forward current as a function of heatsink temperature

$I_F = f(T_s)$



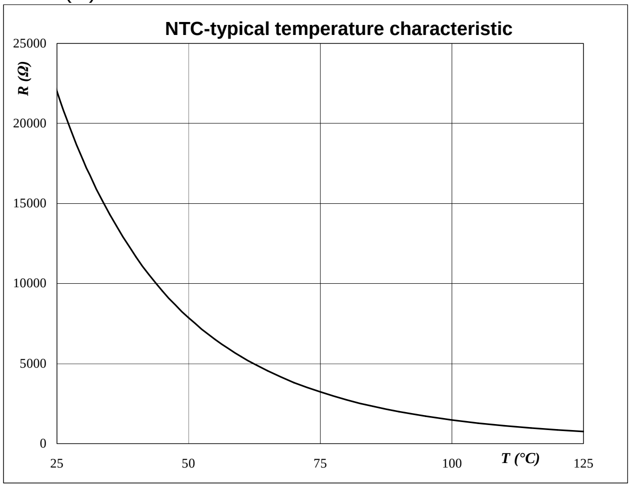
At

T_j = 150 ºC

Thermistor

figure 1.	Thermistor

Typical NTC characteristic
as a function of temperature
$R = f(T)$



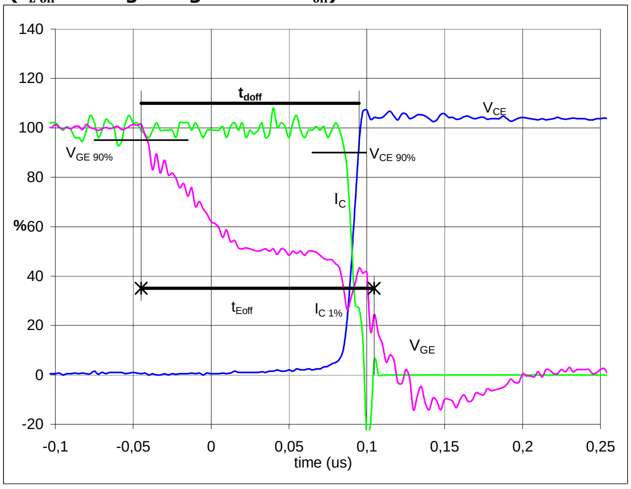
Switching Definitions H-Bridge

General conditions

T_j	=	124 °C
R_{gon}	=	16 Ω
R_{goff}	=	4 Ω

figure 1. **MOSFET**

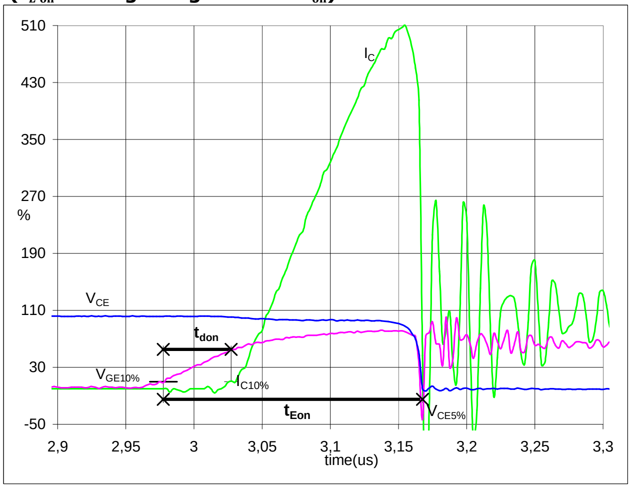
Turn-off Switching Waveforms & definition of t_{doff}, t_{Eoff}
($t_{E\,off}$ = integrating time for E_{off})



V_{GE} (0%) =	0	V
V_{GE} (100%) =	10	V
V_C (100%) =	400	V
I_C (100%) =	15	A
t_{doff} =	0,13	μs
$t_{E\,off}$ =	0,15	μs

figure 2. **MOSFET**

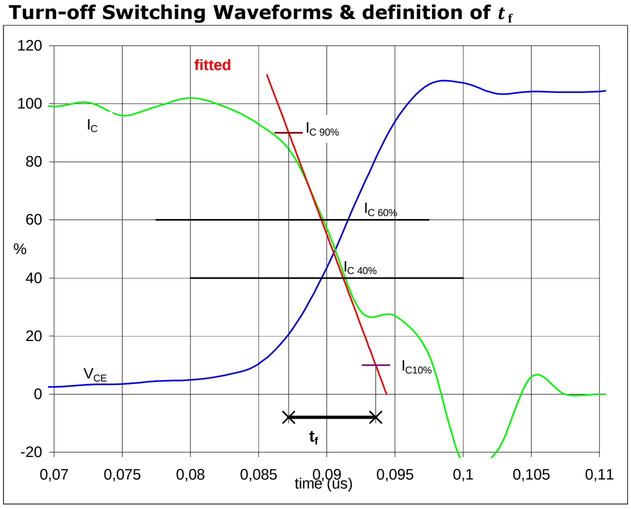
Turn-on Switching Waveforms & definition of t_{don}, t_{Eon}
($t_{E\,on}$ = integrating time for E_{on})



V_{GE} (0%) =	0	V
V_{GE} (100%) =	10	V
V_C (100%) =	400	V
I_C (100%) =	15	A
t_{don} =	0,06	μs
$t_{E\,on}$ =	0,19	μs

figure 3. **MOSFET**

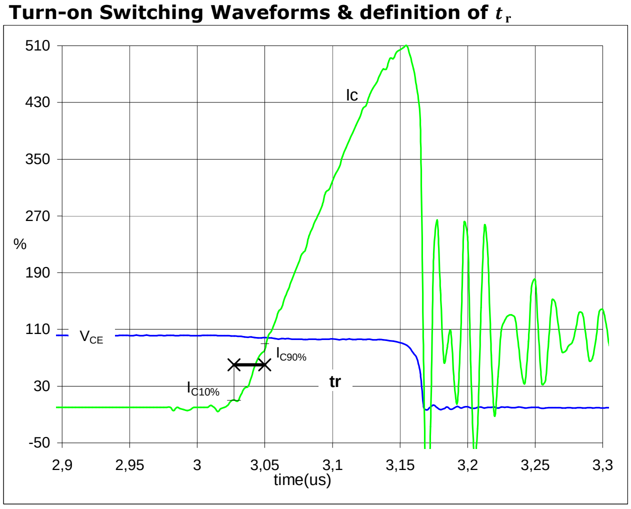
Turn-off Switching Waveforms & definition of t_f



V_C (100%) =	400	V
I_C (100%) =	15	A
t_f =	0,01	μs

figure 4. **MOSFET**

Turn-on Switching Waveforms & definition of t_r

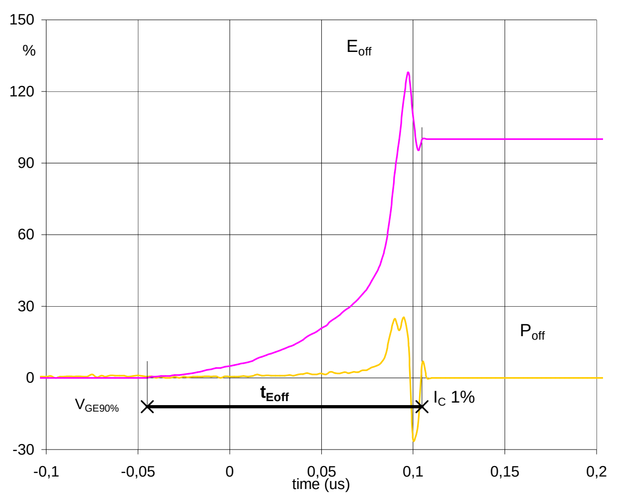


V_C (100%) =	400	V
I_C (100%) =	15	A
t_r =	0,02	μs

Switching Definitions H-Bridge

figure 5. **MOSFET**

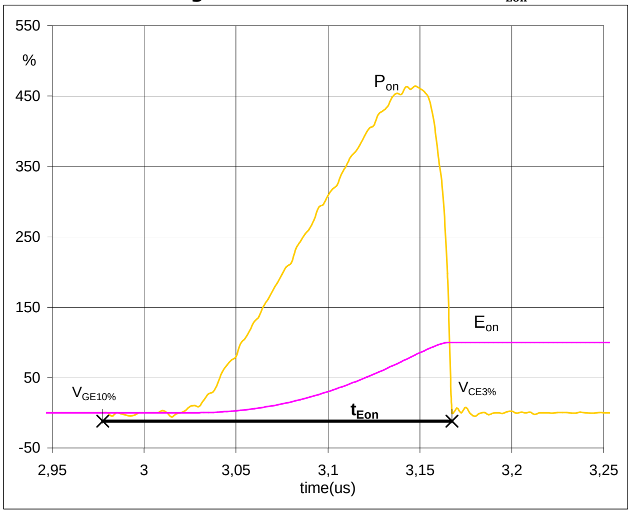
Turn-off Switching Waveforms & definition of t_{Eoff}



P_{off} (100%) =	6,13	kW
E_{off} (100%) =	0,02	mJ
$t_{E\,off}$ =	0,15	µs

figure 6. **MOSFET**

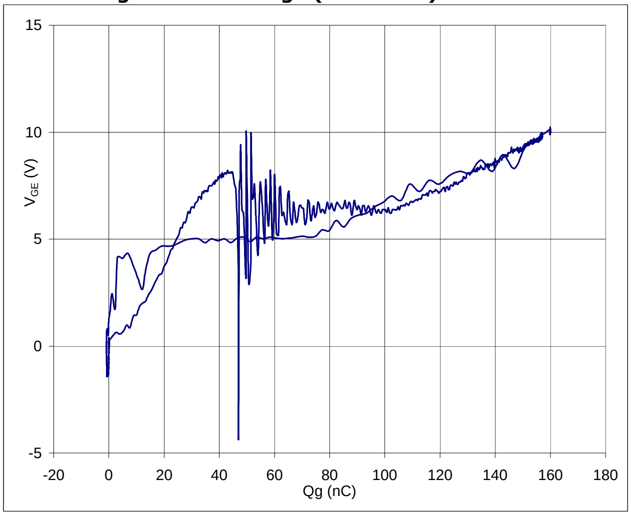
Turn-on Switching Waveforms & definition of t_{Eon}



P_{on} (100%) =	6,13	kW
E_{on} (100%) =	2,27	mJ
$t_{E\,on}$ =	0,19	µs

figure 7. **MOSFET**

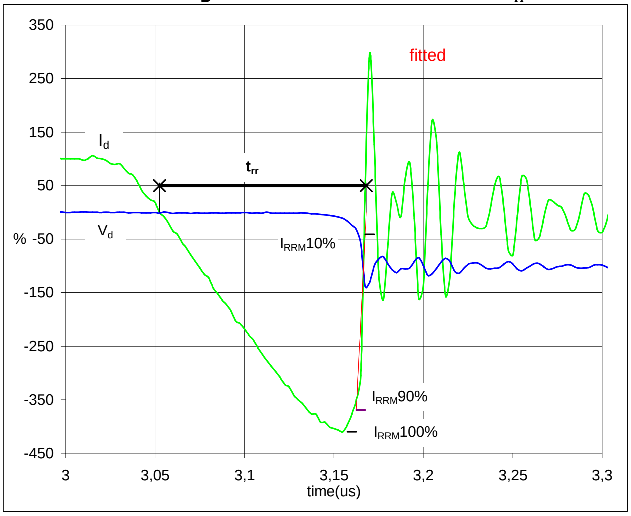
Gate voltage vs Gate charge (measured)



$V_{GE\,off}$ =	0	V
$V_{GE\,on}$ =	10	V
V_C (100%) =	400	V
I_C (100%) =	15	A
Q_g =	159,93	nC

figure 8. **FWD**

Turn-off Switching Waveforms & definition of t_{rr}

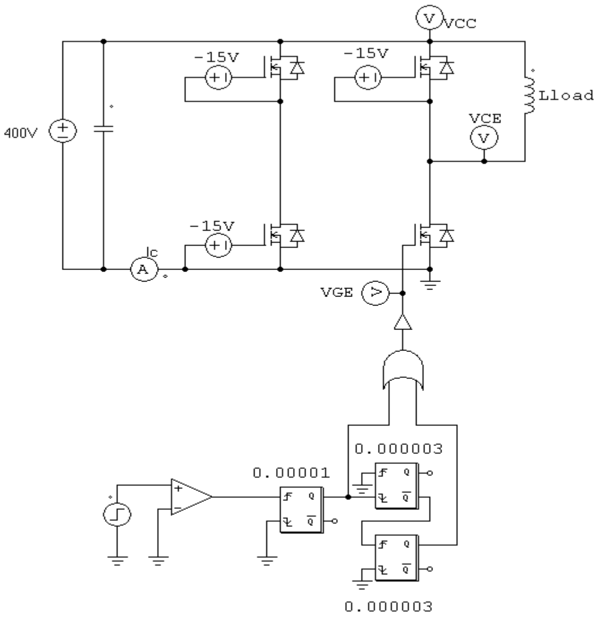


V_d (100%) =	400	V
I_d (100%) =	15	A
I_{RRM} (100%) =	-63	A
t_{rr} =	0,11	µs

Measurement circuits

figure 11.

BUCK stage switching measurement circuit



Ordering Code & Marking

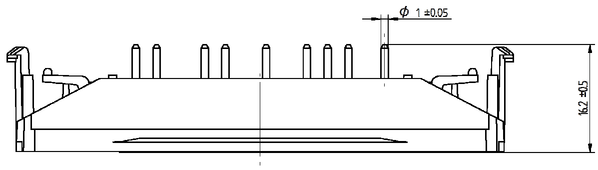
Version	Ordering Code
without thermal paste 12mm housing with solder pins	10-FZ06BIA083FI-P896E
with thermal paste 12mm housing with solder pins	10-FZ06BIA083FI-P896E-/3/

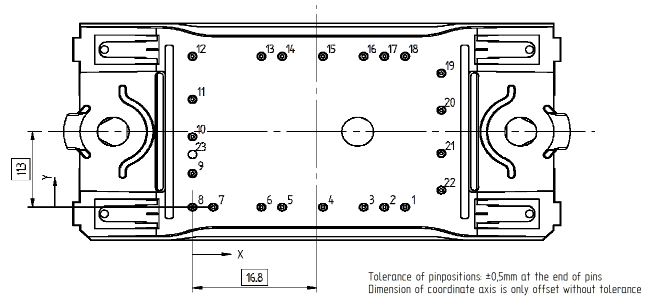
	Name	Date code	UL & VIN	Lot	Serial
Text	NN-NNNNNNNNNNNNNN-TTTTTTVV	WWYY	UL VIN	LLLLL	SSSS

	Type&Ver	Lot number	Serial	Date code		
Datamatrix	TTTTTTVV	LLLLL	SSSS	WWYY		

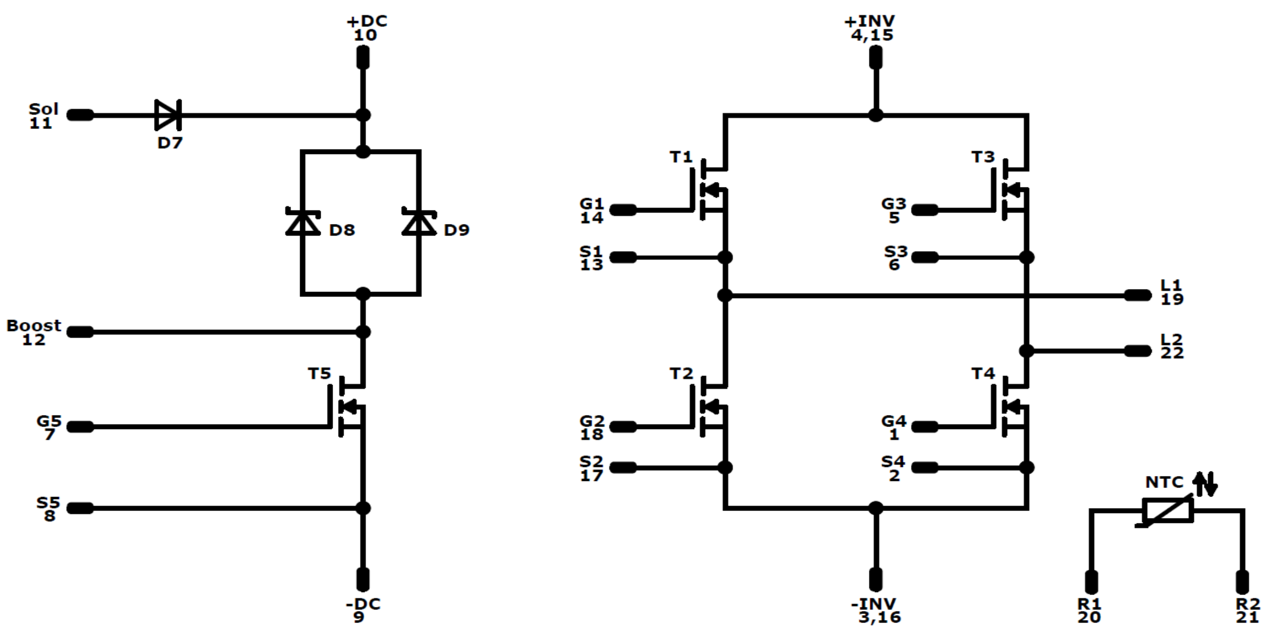
Outline

Pin table [mm]				Pin table [mm]			
Pin	X	Y	Function	Pin	X	Y	Function
1	28,7	0	G4	20	33,6	14,55	R1
2	25,9	0	S4	21	33,6	8,05	R2
3	23,1	0	-INV	22	33,6	2,55	L2
4	17,6	0	+INV	23	Not assembled		
5	12,1	0	G3				
6	9,3	0	S3				
7	2,8	0	G5				
8	0	0	S5				
9	0	5,05	-DC				
10	0	10,55	+DC				
11	0	16,15	Sol				
12	0	22,6	Boost				
13	9,3	22,6	S1				
14	12,1	22,6	G1				
15	17,6	22,6	+INV				
16	23,1	22,6	-INV				
17	25,9	22,6	S2				
18	28,7	22,6	G2				
19	33,6	20,05	L1				





Pinout



Identification

ID	Component	Voltage	Current	Function	Comment
T1, T2, T3, T4	MOSFET	600 V	35 A	H-Bridge Switch	
T5	MOSFET	600 V	45 mΩ	Input Boost Switch	
D8 || D9	FWD	650 V	2 x 8 A	Input Boost Diode	values apply to parallel device
D7	Rectifier	1600 V	35 A	ByPass Diode	
NTC	NTC			Thermistor	

Packaging instruction					
Standard packaging quantity (SPQ)	**135**	>SPQ	Standard	<SPQ	Sample

Handling instruction
Handling instructions for *flow* 0 packages see vincotech.com website.

Package data
Package data for *flow* 0 packages see vincotech.com website.

UL recognition and file number
This device is certified according to UL 1557 standard, UL file number E192116. For more information see vincotech.com website.

Document No.:	Date:	Modification:	Pages
10-FZ06BIA083FI-P896E-D7-14	25 Aug. 2017		