
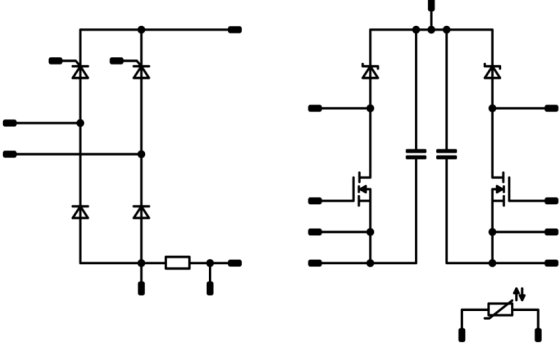




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<i>flow</i> PFC 0	600 V / 99 mΩ
<div style="background-color: #eee; padding: 5px; margin-bottom: 5px;"><b>Features</b></div> <ul style="list-style-type: none"> <li>Compact and low inductance design</li> <li>Suitable for Interleaved topology</li> <li>Suitable for current sensing in source</li> <li>C6 series CoolMos™ and SiC boost diode</li> </ul>	<div style="background-color: #eee; padding: 5px; margin-bottom: 5px;"><b>flow0 17mm housing</b></div> 
<div style="background-color: #eee; padding: 5px; margin-bottom: 5px;"><b>Target applications</b></div> <ul style="list-style-type: none"> <li>Welding</li> <li>SMPS</li> <li>Motor Drives</li> <li>UPS</li> <li>Battery Charger</li> </ul>	<div style="background-color: #eee; padding: 5px; margin-bottom: 5px;"><b>Schematic</b></div> 
<div style="background-color: #eee; padding: 5px; margin-bottom: 5px;"><b>Types</b></div> <ul style="list-style-type: none"> <li>10-F0062TA099FS-P980D57</li> </ul>	

## Maximum Ratings

$T_j = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Condition	Value	Unit
<b>Rectifier Diode</b>				
Peak Repetitive Reverse Voltage	$V_{RRM}$		1600	V
Continuous (direct) forward current	$I_F$	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	51	A
Surge (non-repetitive) forward current	$I_{FSM}$	50 Hz Single Half Sine Wave $t_p = 10\text{ ms}$ $T_j = 150\text{ °C}$	280	A
Surge current capability	$I^2t$		390	$A^2s$
Total power dissipation	$P_{tot}$	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	68	W
Maximum Junction Temperature	$T_{jmax}$		150	°C



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## Maximum Ratings

$T_j = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Condition	Value	Unit
<b>Rectifier Thyristor</b>				
Repetitive peak reverse voltage	$V_{RRM}$		1200	V
Forward average current	$I_{FAV}$	sine, $d = 0,5$ $T_j = T_{jmax}$	$T_s = 80\text{ °C}$ 48	A
Surge forward current	$I_{FSM}$	$t_p = 10\text{ ms}$	$T_j = 25\text{ °C}$ 250	A
$I^2t$ value	$I^2t$		310	A <sup>2</sup> s
Power dissipation	$P_{tot}$	$T_j = T_{jmax}$	$T_s = 80\text{ °C}$ 71	W
Maximum Junction Temperature	$T_{jmax}$		150	°C
<b>PFC Switch</b>				
Drain-source voltage	$V_{DSS}$		600	V
Drain current	$I_D$	$T_j = T_{jmax}$	$T_s = 80\text{ °C}$ 18	A
Peak drain current	$I_{DM}$	$t_p$ limited by $T_{jmax}$	112	A
Avalanche energy, single pulse	$E_{AS}$	$I_D = 6,6\text{ A}$ $V_{DD} = 50\text{ V}$	796	mJ
Avalanche energy, repetitive	$E_{AR}$	$I_D = 6,6\text{ A}$ $V_{DD} = 50\text{ V}$	1,20	mJ
Avalanche current, repetitive	$I_{AR}$	$t_p$ limited by $T_{jmax}$ $PAV = E_{AR} * f$	6,6	A
MOSFET dv/dt ruggedness	dv/dt	$V_{DS} = 480\text{ V}$	50	V/ns
Total power dissipation	$P_{tot}$	$T_j = T_{jmax}$	$T_s = 80\text{ °C}$ 88	W
Gate-source voltage	$V_{GSS}$		±20	V
Reverse diode dv/dt	dv/dt		15	V/ns
Maximum Junction Temperature	$T_{jmax}$		150	°C
<b>PFC Diode</b>				
Peak Repetitive Reverse Voltage	$V_{RRM}$		600	V
Continuous (direct) forward current	$I_F$	$T_j = T_{jmax}$	$T_s = 80\text{ °C}$ 15	A
Repetitive peak forward current	$I_{FRM}$		67	A
Total power dissipation	$P_{tot}$	$T_j = T_{jmax}$	$T_s = 80\text{ °C}$ 35	W
Maximum Junction Temperature	$T_{jmax}$		175	°C



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## Maximum Ratings

$T_j = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Condition	Value	Unit
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### PFC Shunt

DC forward current	$I_F$	$T_c = 105\text{ °C}$	35	A
Power dissipation	$P_{tot}$	$T_c = 105\text{ °C}$	5	W

### PFC Capacitance

Maximum DC voltage	$V_{MAX}$		500	V
Operation Temperature	$T_{op}$		-55...+125	°C

## Module Properties

### Thermal Properties

Storage temperature	$T_{stg}$		-40...+125	°C
Operation temperature under switching condition	$T_{jop}$		$-40...+(T_{jmax} - 25)$	°C

### Isolation Properties

Isolation voltage	$V_{isol}$	DC Voltage	$t_p = 2s$	4000	V
Creepage distance				min. 12,7	mm
Clearance				min. 12,7	mm
Comparative Tracking Index	CTI			> 200	



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## Characteristic Values

Parameter	Symbol	Conditions					Value			Unit	
		$V_{GE}$ [V]	$V_{GS}$ [V]	$V_{CE}$ [V]	$V_{GS}$ [V]	$V_r$ [V]	$I_C$ [A]	$I_D$ [A]	$I_F$ [A]		$T_j$ [°C]

### Rectifier Diode

#### Static

Forward voltage	$V_F$				50	25 125		1,31 1,33	1,4	V
Reverse leakage current	$I_r$			1600		25 150			20 1500	$\mu$ A

#### Thermal

Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material $\lambda = 3,4$ W/mK						1,03		K/W
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### Rectifier Thyristor

#### Static

Forward voltage	$V_T$				30	25 125		1,26 1,22	1,33 1,32	V
Threshold voltage (for power loss calc. only)	$V_{th}$				30	25 125			0,9	V
Slope resistance (for power loss calc. only)	$r_t$				30	25 125			9	m $\Omega$
Reverse current	$I_r$			1200		25 125			0,01 2	mA
Gate controlled delay time	$t_{GD}$	$T_{vj} = 25$ °C $I_G = 0,5$ A $di/dt = 0,5$ A/ $\mu$ s				25 125		2		$\mu$ s
Gate controlled rise time	$t_{GR}$	$V_D = 2/3 V_{DRM}$		1072		25 125		2		$\mu$ s
Critical rate of rise of off-state voltage	$(dv/dt)_{cr}$					25 125			500	V/ $\mu$ s
Critical rate of rise of on-state current	$(di/dt)_{cr}$	$I_G = 0,2$ A $t_p = 200$ $\mu$ s $di_G/dt = 0,2$ A/ $\mu$ s $f = 50$ Hz		$2/3 V_{DRM}$		25 125			150	A/ $\mu$ s
Circuit commutated turn-off time	$t_q$	$dv/dt = 20$ V/ $\mu$ s $-di/dt = 10$ $\mu$ s $I_T = 2,6$ A $t_p = 200$ $\mu$ s		100		25 125		150		$\mu$ s
Holding current	$I_H$			6		25 125			220	mA
Latching current	$I_L$	$t_p = 10$ $\mu$ s $I_G = 0,2$ A $di_G/dt = 0,2$ A/ $\mu$ s				25 125			90	mA
Gate trigger voltage	$V_{GT}$					25 -40			1,3 1,6	V
Gate trigger current	$I_{GT}$			6		25 -40	11		28 50	mA
Gate non-trigger voltage	$V_{GD}$			$2/3 V_{DRM}$		25 125			0,2	V
Gate non-trigger current	$I_{GD}$					25 125			1	mA

#### Thermal

Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material $\lambda = 3,4$ W/mK						1		K/W
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### Characteristic Values

Parameter	Symbol	Conditions					Value			Unit
		$V_{GS}$ [V]	$V_{CE}$ [V]	$I_C$ [A]	$T_j$ [°C]	Min	Typ	Max		

#### PFC Switch

##### Static

Parameter	Symbol	$V_{GS}$ [V]	$V_{CE}$ [V]	$I_C$ [A]	$T_j$ [°C]	Min	Typ	Max	Unit
Drain-source on-state resistance	$r_{DS(on)}$		10		18,1	25 125 150	100 209		mΩ
Gate-source threshold voltage	$V_{GS(th)}$	$V_{GS} = V_{DS}$			0,00121	25 125	2,5 3	3,5	V
Gate to Source Leakage Current	$I_{GSS}$		20	0		25 125		100	nA
Zero Gate Voltage Drain Current	$I_{DSS}$		0	600		25 125		5	μA
Internal gate resistance	$r_g$						1,6		Ω
Gate charge	$Q_G$						119		nC
Gate to source charge	$Q_{GS}$		0/10	480	18,1	25	14		
Gate to drain charge	$Q_{GD}$						61		
Short-circuit input capacitance	$C_{iss}$						2660		pF
Short-circuit output capacitance	$C_{oss}$	$f = 1\text{MHz}$	0	100	25		154		
Reverse transfer capacitance	$C_{rss}$						7		

##### Thermal

Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material $\lambda=3,4 \text{ W/mK}$					0,8		K/W
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##### MOSFET Switching

Parameter	Symbol	$R_{goff}$ [Ω]	$R_{gon}$ [Ω]	$I_C$ [A]	$T_j$ [°C]	Min	Typ	Max	Unit
Turn-on delay time	$t_{d(on)}$	$R_{goff} = 2 \Omega$ $R_{gon} = 2 \Omega$		10	400	18	25	20	ns
Rise time	$t_r$						125	19	
Turn-off delay time	$t_{d(off)}$						25	4	
Fall time	$t_f$						125	4	
Turn-on energy (per pulse)	$E_{on}$	$Q_{rFWD} = 0,1 \mu\text{C}$ $Q_{rFWD} = 0,1 \mu\text{C}$				25	0,053	mWs	
Turn-off energy (per pulse)	$E_{off}$					125	0,063		
						25	0,015		
						125	0,024		



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## Characteristic Values

Parameter	Symbol	Conditions					Value			Unit
		$V_{GE}$ [V]	$V_{GS}$ [V]	$V_{CE}$ [V]	$V_{GS}$ [V]	$I_C$ [A]	$I_D$ [A]	$I_F$ [A]	$T_j$ [°C]	

### PFC Diode

#### Static

Forward voltage	$V_F$				10	25 125 150		1,49 1,69 1,78	2,4	V
Reverse leakage current	$I_r$			600		25 150			50 200	$\mu$ A

#### Thermal

Thermal resistance junction to sink	$R_{th(j-s)}$	phase-change material $\lambda = 3,4$ W/mK						2,75		K/W
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#### FWD Switching

Peak recovery current	$I_{RRM}$	$di/dt = 5949$ A/ $\mu$ s $di/dt = 4798$ A/ $\mu$ s	10	400	18	25 125		18 16		A
Reverse recovery time	$t_{rr}$					25 125		7 7		ns
Recovered charge	$Q_r$					25 125		0,060 0,051		$\mu$ C
Reverse recovered energy	$E_{rec}$					25 125		0,003 0,002		mWs
Peak rate of fall of recovery current	$(di_{rr}/dt)_{max}$					25 125		8682 5922		A/ $\mu$ s

### PFC Shunt

Resistance	$R$						9,9	10	10,2	m $\Omega$
Tolerance							-1		+2	%
Temperature coefficient	$t_c$					20 - 60			50	ppm/K
Internal heat resistance	$R_{thi}$								13	K/W
Inductance	$L$								3	nH

### PFC Capacitance

Capacitance	$C$							270		nF
Tolerance							-20		+20	%



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### Characteristic Values

Parameter	Symbol	Conditions					Value			Unit	
		$V_{GE}$ [V]	$V_{GS}$ [V]	$V_{CE}$ [V]	$V_{GS}$ [V]	$V_r$ [V]	$I_C$ [A]	$I_D$ [A]	$I_F$ [A]		$T_j$ [°C]

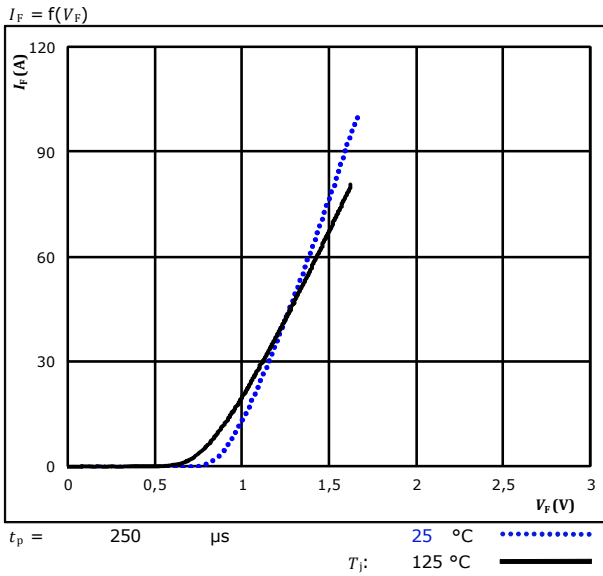
#### Thermistor

Rated resistance	$R$					25		22		kΩ
Deviation of R100	$\Delta_{R/R}$	R100=1484 Ω				100	-5		5	%
Power dissipation	$P$					25		5		mW
Power dissipation constant						25		1,5		mW/K
B-value	$B_{(25/50)}$	Tol. ±1%				25		3962		K
B-value	$B_{(25/100)}$	Tol. ±1%				25		4000		K
Vincotech NTC Reference									I	

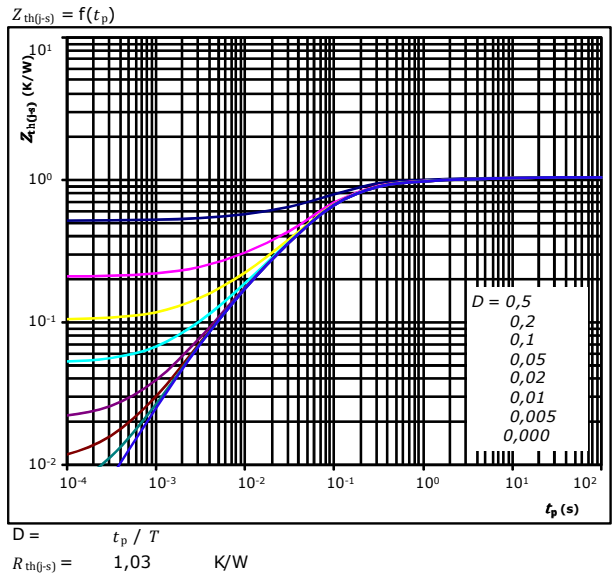


### Rectifier Diode Characteristics

Typical forward characteristics Diode



Transient thermal impedance as a function of pulse width Diode



Diode thermal model values

$R$ (K/W)	$\tau$ (s)
4,2180E-02	6,7950E+00
1,3600E-01	6,2940E-01
6,3390E-01	9,0540E-02
1,4600E-01	3,1010E-02
6,3770E-02	4,7560E-03
1,2000E-02	1,5250E-02

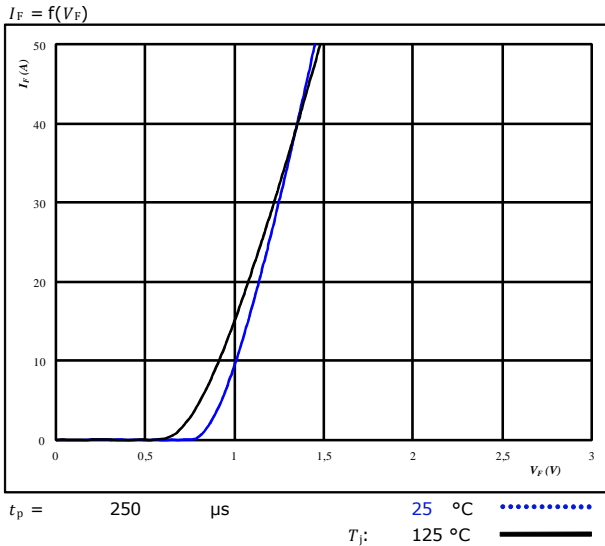




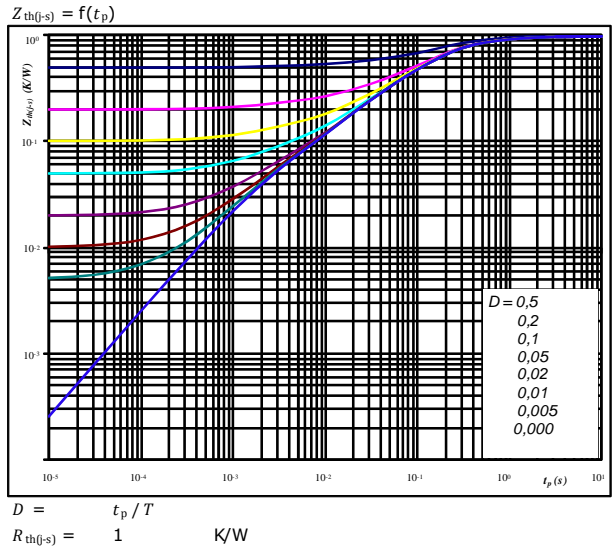
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## Rectifier Thyristor Characteristics

Typical forward characteristics Thyristor



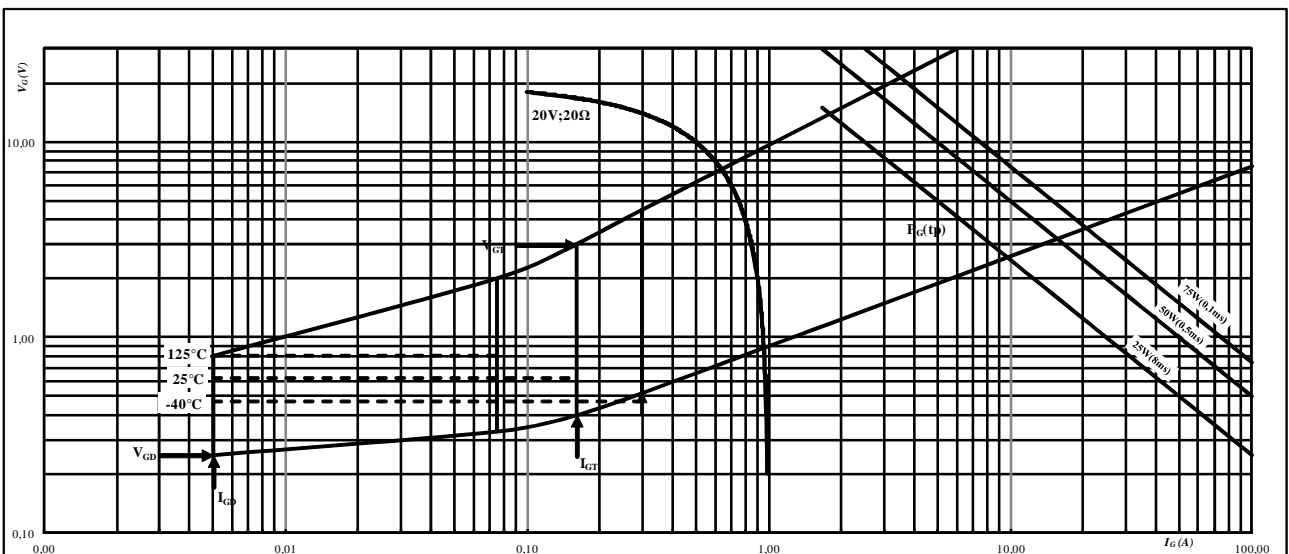
Transient thermal impedance as a function of pulse width Thyristor



FWD thermal model values

$R$ (K/W)	$\tau$ (s)
2,07E-02	2,12E+01
1,60E-01	9,80E-01
6,58E-01	1,61E-01
1,28E-01	2,45E-02
3,31E-02	2,04E-03

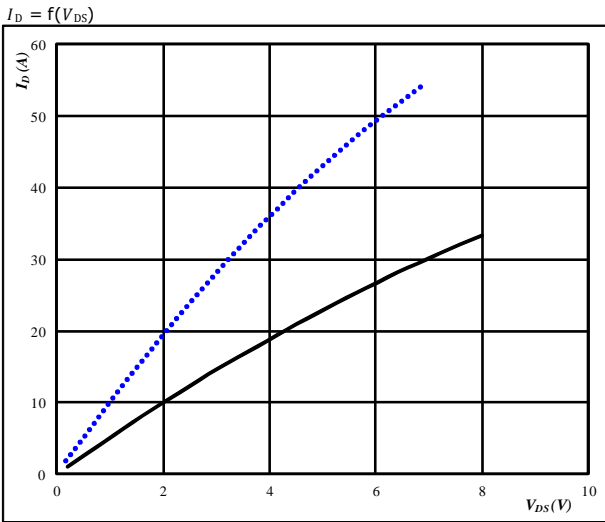
Gate trigger characteristics Thyristor





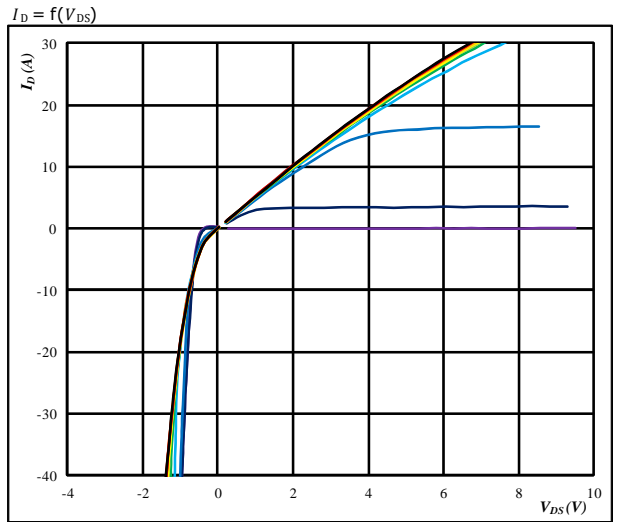
### PFC Switch Characteristics

Typical output characteristics MOSFET



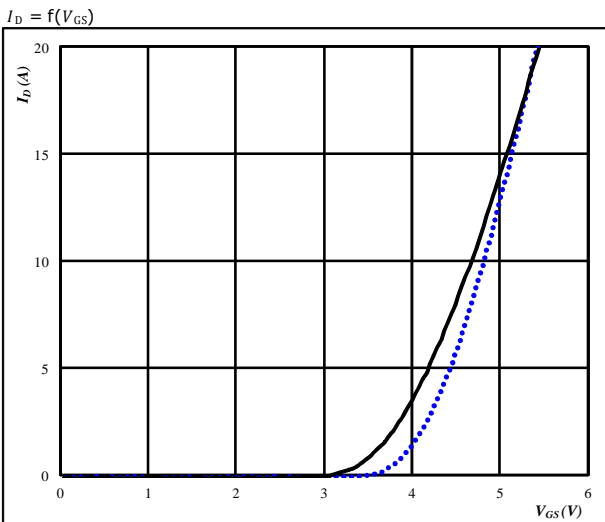
$t_p = 250 \mu s$   
 $V_{GS} = 10 V$   
 $T_j = 25 \text{ }^\circ C$  (dotted blue line)  
 $T_j = 125 \text{ }^\circ C$  (solid black line)

Typical output characteristics MOSFET



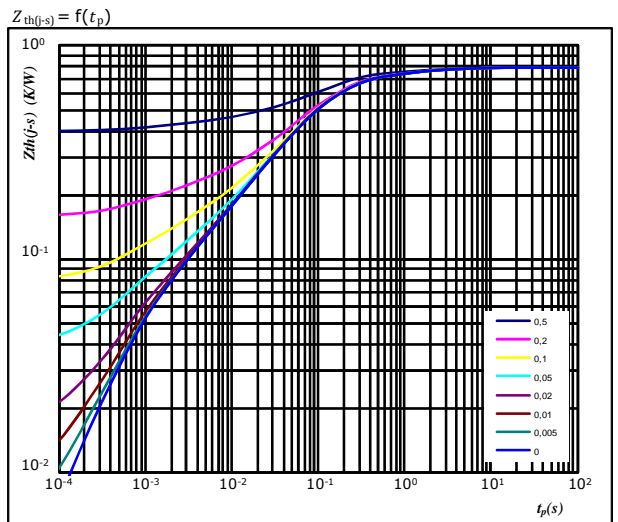
$t_p = 250 \mu s$   
 $T_j = 125 \text{ }^\circ C$   
 $V_{GS}$  from 3 V to 13 V in steps of 1 V

Typical transfer characteristics MOSFET



$t_p = 100 \mu s$   
 $V_{DS} = 10 V$   
 $T_j = 25 \text{ }^\circ C$  (dotted blue line)  
 $T_j = 125 \text{ }^\circ C$  (solid black line)

Transient thermal impedance as a function of pulse width MOSFET



$D = t_p / T$   
 $R_{th(j-s)} = 0,8 \text{ K/W}$

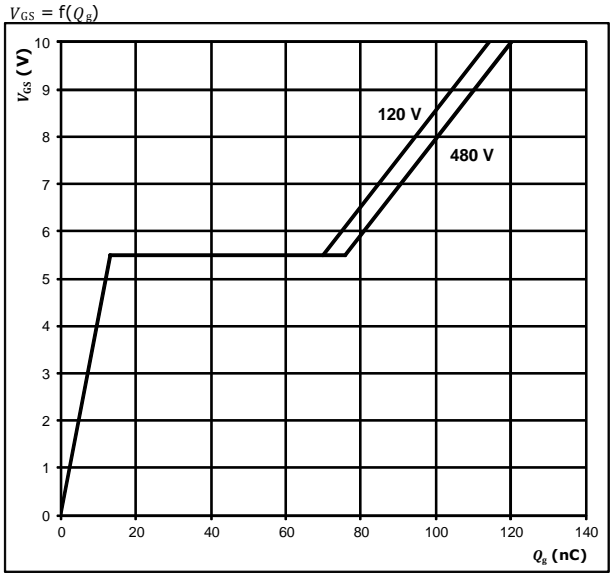
R (K/W)	$\tau$ (s)
6,19E-02	2,26E+00
1,10E-01	4,08E-01
4,12E-01	9,23E-02
1,04E-01	2,31E-02
5,73E-02	5,67E-03
4,98E-02	8,49E-04



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### PFC Switch Characteristics

Gate voltage vs Gate charge MOSFET

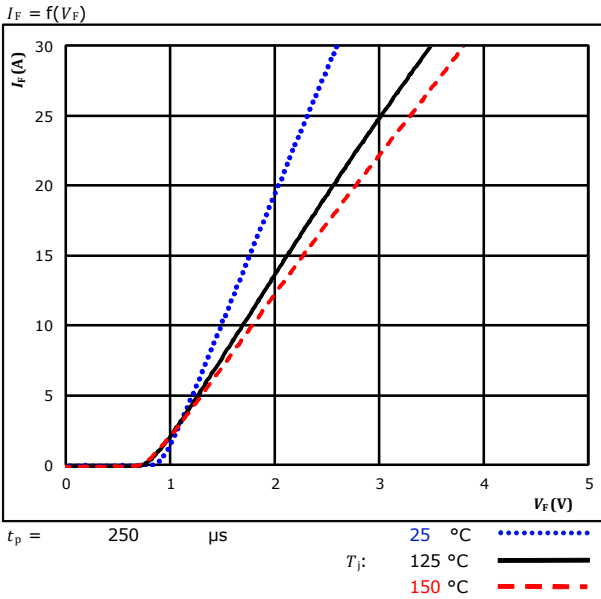


At  
 $I_D = 18$  A

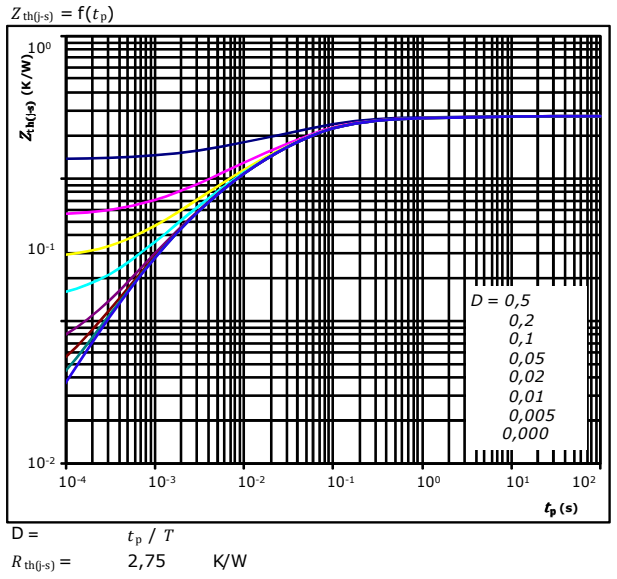


### PFC Diode Characteristics

**Typical forward characteristics** FWD



**Transient thermal impedance as a function of pulse width** FWD

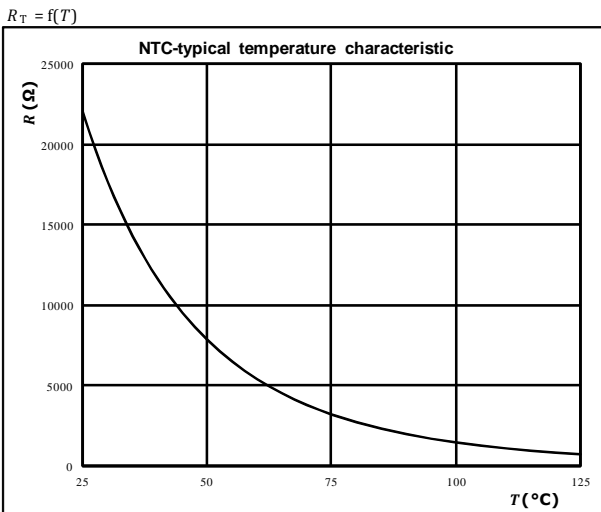


FWD thermal model values

R (K/W)	$\tau$ (s)
7,6230E-02	7,9980E+00
2,3080E-01	4,5940E-01
1,1880E+00	6,1570E-02
6,9160E-01	1,3630E-02
4,4070E-01	3,2880E-03
1,1880E-01	6,6820E-04

### Thermistor

**Thermistor typical temperature characteristic**  
**Typical NTC characteristic**  
**as a function of temperature**

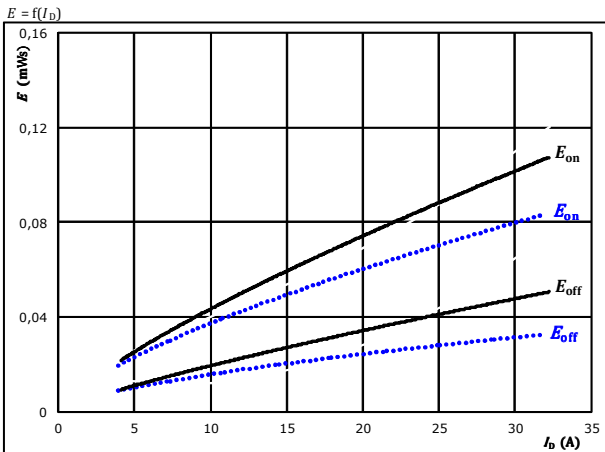




### PFC Switching Characteristics

**figure 1.** MOSFET

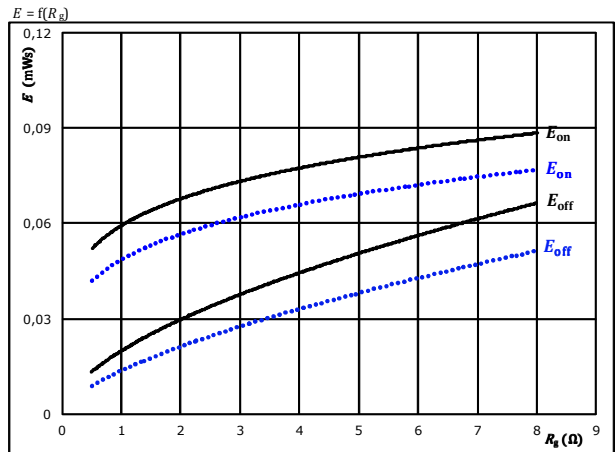
Typical switching energy losses as a function of drain current



With an inductive load at  
 $V_{DS} = 400$  V  
 $V_{GS} = 10$  V  
 $R_{g\text{on}} = 2$   $\Omega$   
 $R_{g\text{off}} = 2$   $\Omega$   
 $T_j: 25$  °C (dotted blue line)  
 $125$  °C (solid black line)

**figure 2.** MOSFET

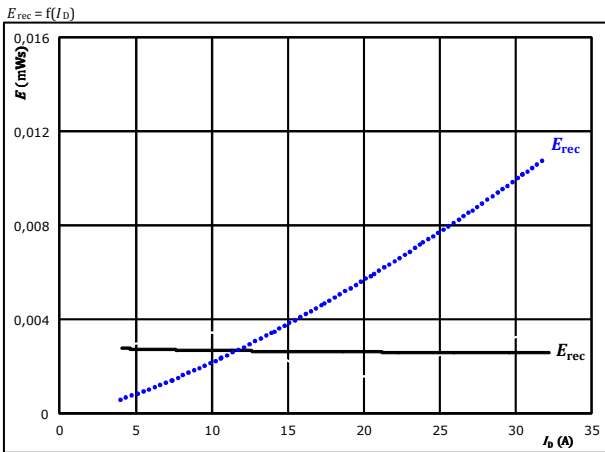
Typical switching energy losses as a function of gate resistor



With an inductive load at  
 $V_{DS} = 400$  V  
 $V_{GS} = 10$  V  
 $I_D = 18$  A  
 $T_j: 25$  °C (dotted blue line)  
 $125$  °C (solid black line)

**figure 3.** FWD

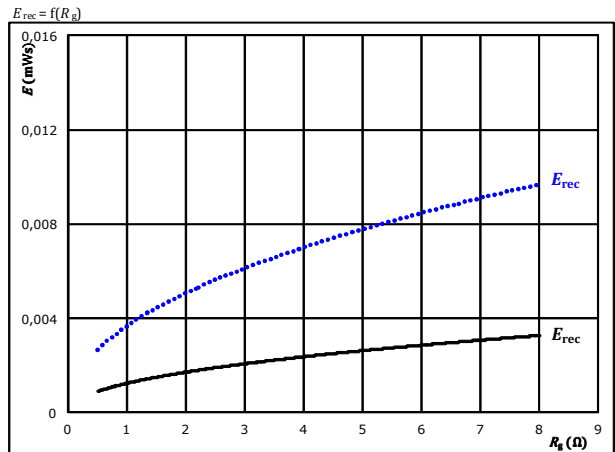
Typical reverse recovered energy loss as a function of drain current



With an inductive load at  
 $V_{DS} = 400$  V  
 $V_{GS} = 10$  V  
 $R_{g\text{on}} = 2$   $\Omega$   
 $T_j: 25$  °C (dotted blue line)  
 $125$  °C (solid black line)

**figure 4.** FWD

Typical reverse recovered energy loss as a function of gate resistor

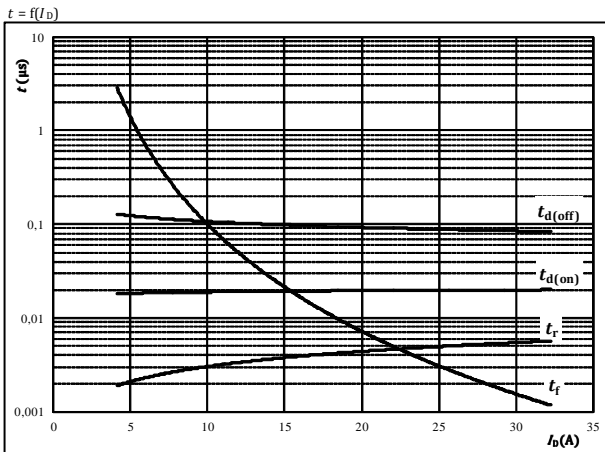


With an inductive load at  
 $V_{DS} = 400$  V  
 $V_{GS} = 10$  V  
 $I_D = 18$  A  
 $T_j: 25$  °C (dotted blue line)  
 $125$  °C (solid black line)



### PFC Switching Characteristics

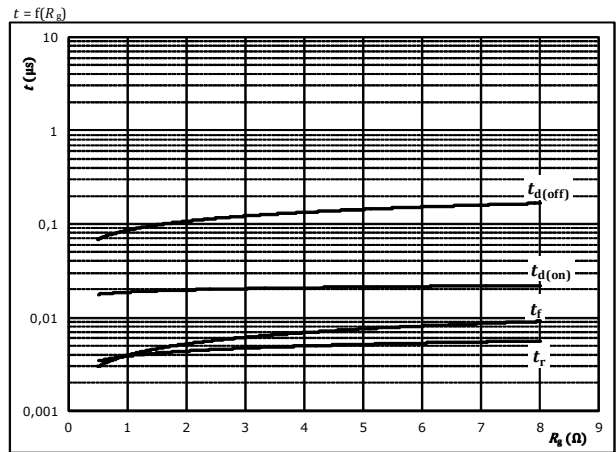
**figure 5.** MOSFET  
Typical switching times as a function of drain current



With an inductive load at

- $T_j = 125 \text{ }^\circ\text{C}$
- $V_{DS} = 400 \text{ V}$
- $V_{GS} = 10 \text{ V}$
- $R_{g\text{on}} = 2 \text{ } \Omega$
- $R_{g\text{off}} = 2 \text{ } \Omega$

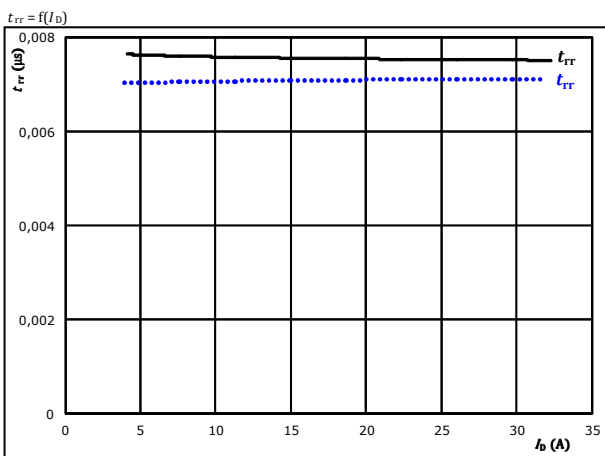
**figure 6.** MOSFET  
Typical switching times as a function of gate resistor



With an inductive load at

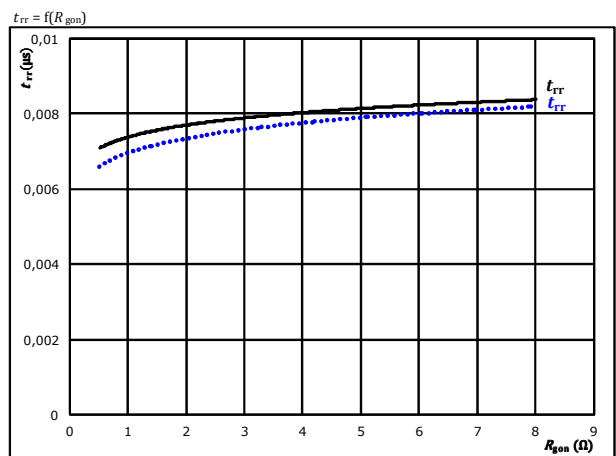
- $T_j = 125 \text{ }^\circ\text{C}$
- $V_{DS} = 400 \text{ V}$
- $V_{GS} = 10 \text{ V}$
- $I_D = 18 \text{ A}$

**figure 7.** FWD  
Typical reverse recovery time as a function of drain current



- At  $V_{DS} = 400 \text{ V}$   
 $V_{GS} = 10 \text{ V}$   
 $R_{g\text{on}} = 2 \text{ } \Omega$
- $T_j: 25 \text{ }^\circ\text{C}$  (dotted line)  
 $125 \text{ }^\circ\text{C}$  (solid line)

**figure 8.** FWD  
Typical reverse recovery time as a function of MOSFET turn on gate resistor



- At  $V_{DS} = 400 \text{ V}$   
 $V_{GS} = 10 \text{ V}$   
 $I_D = 18 \text{ A}$
- $T_j: 25 \text{ }^\circ\text{C}$  (dotted line)  
 $125 \text{ }^\circ\text{C}$  (solid line)

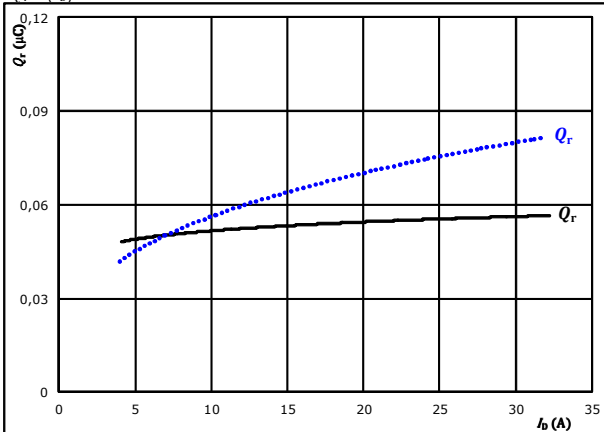


### PFC Switching Characteristics

**figure 9.** FWD

Typical recovered charge as a function of drain current

$Q_r = f(I_D)$

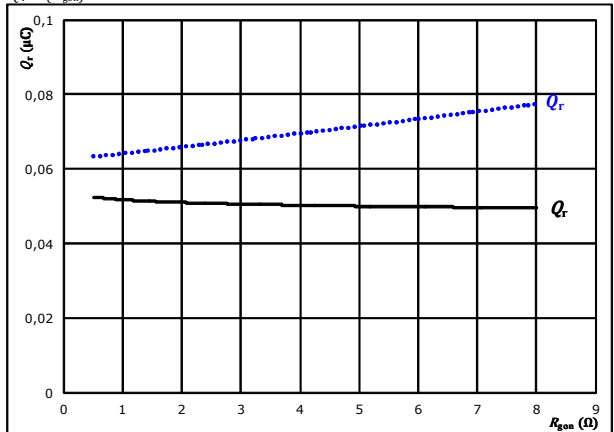


At  $V_{DS} = 400$  V  $T_j: 25$  °C (blue dotted line)  
 $V_{GS} = 10$  V  $T_j: 125$  °C (black solid line)  
 $R_{ggn} = 2$  Ω

**figure 10.** FWD

Typical recovered charge as a function of MOSFET turn on gate resistor

$Q_r = f(R_{ggn})$

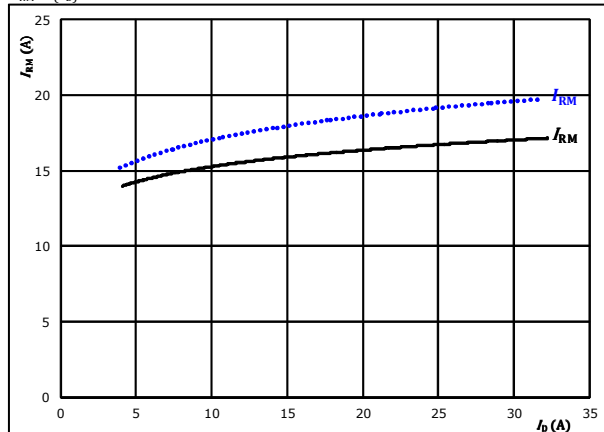


At  $V_{DS} = 400$  V  $T_j: 25$  °C (blue dotted line)  
 $V_{GS} = 10$  V  $T_j: 125$  °C (black solid line)  
 $I_D = 18$  A

**figure 11.** FWD

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

$I_{RM} = f(I_D)$

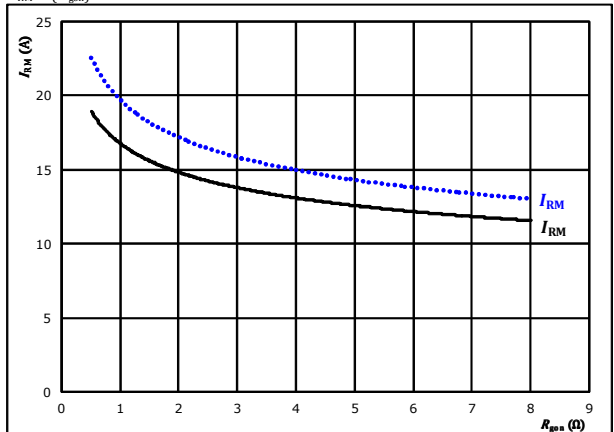


At  $V_{DS} = 400$  V  $T_j: 25$  °C (blue dotted line)  
 $V_{GS} = 10$  V  $T_j: 125$  °C (black solid line)  
 $R_{ggn} = 2$  Ω

**figure 12.** FWD

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

$I_{RM} = f(R_{ggn})$



At  $V_{DS} = 400$  V  $T_j: 25$  °C (blue dotted line)  
 $V_{GS} = 10$  V  $T_j: 125$  °C (black solid line)  
 $I_D = 18$  A

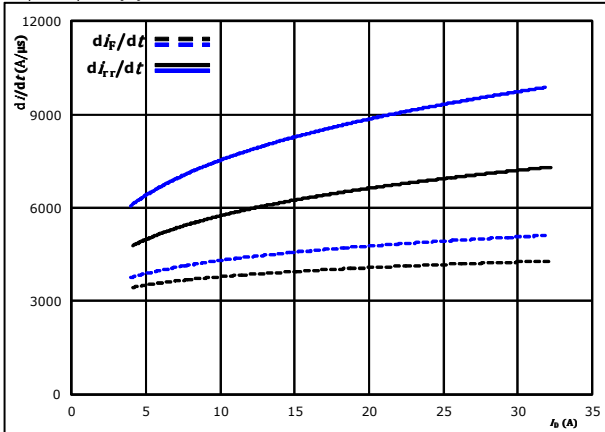


### PFC Switching Characteristics

**figure 13.** FWD

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

$$di_F/dt, di_{rr}/dt = f(I_D)$$

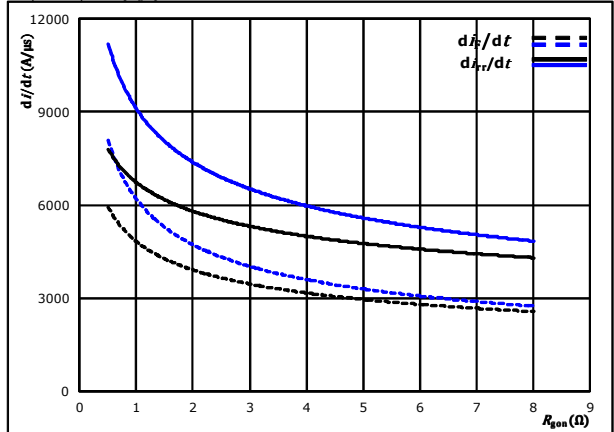


At  $V_{DS} = 400$  V  
 $V_{GS} = 10$  V  
 $R_{gon} = 2$   $\Omega$   
 $T_j = 25$  °C  
 $T_j = 125$  °C

**figure 14.** FWD

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

$$di_F/dt, di_{rr}/dt = f(R_{gon})$$

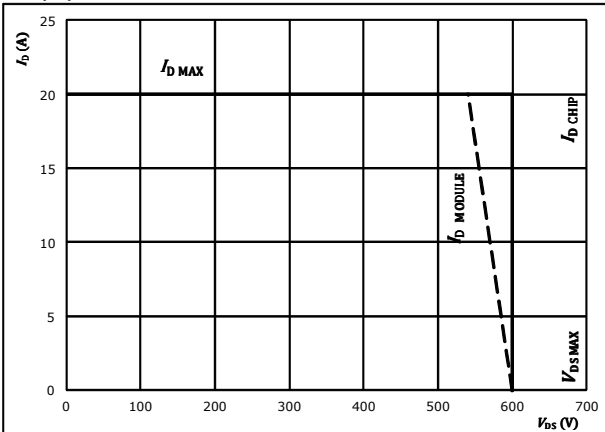


At  $V_{DS} = 400$  V  
 $V_{GS} = 10$  V  
 $I_D = 18$  A  
 $T_j = 25$  °C  
 $T_j = 125$  °C

**figure 15.** MOSFET

Reverse bias safe operating area

$$I_D = f(V_{DS})$$



At  $T_j = 150$  °C  
 $R_{gon} = 2$   $\Omega$   
 $R_{goff} = 2$   $\Omega$





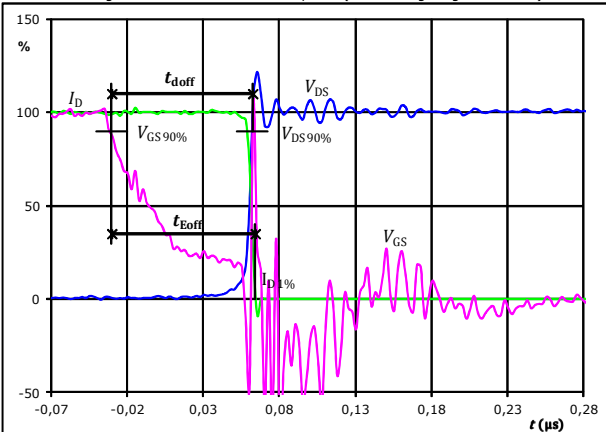
### PFC Switching Definitions

**General conditions**

$T_j$	=	125 °C
$R_{gon}$	=	2 $\Omega$
$R_{goff}$	=	2 $\Omega$

**figure 1. MOSFET**

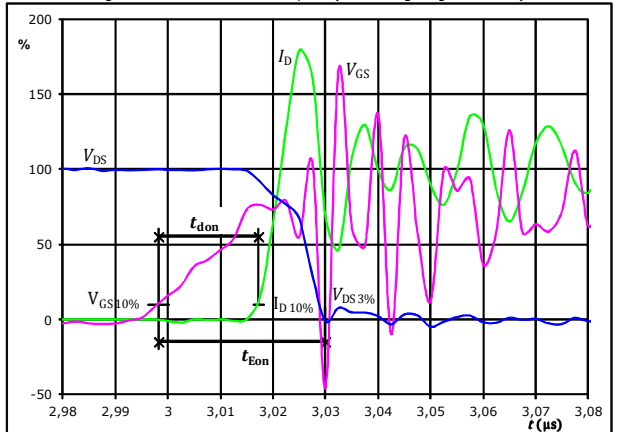
Turn-off Switching Waveforms & definition of  $t_{doff}$ ,  $t_{Eoff}$  ( $t_{Eoff}$  = integrating time for Eoff)



$V_{GS}(0\%) =$	0	V
$V_{GS}(100\%) =$	10	V
$V_{DS}(100\%) =$	400	V
$I_D(100\%) =$	18	A
$t_{doff} =$	0,092	$\mu s$
$t_{Eoff} =$	0,094	$\mu s$

**figure 2. MOSFET**

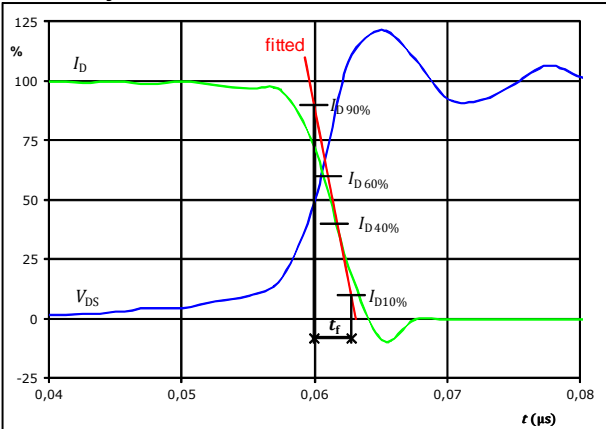
Turn-on Switching Waveforms & definition of  $t_{don}$ ,  $t_{Eon}$  ( $t_{Eon}$  = integrating time for Eon)



$V_{GS}(0\%) =$	0	V
$V_{GS}(100\%) =$	10	V
$V_{DS}(100\%) =$	400	V
$I_D(100\%) =$	18	A
$t_{don} =$	0,019	$\mu s$
$t_{Eon} =$	0,032	$\mu s$

**figure 3. MOSFET**

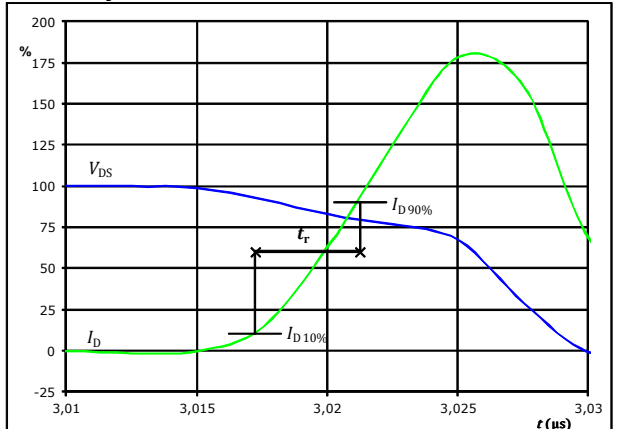
Turn-off Switching Waveforms & definition of  $t_f$



$V_{DS}(100\%) =$	400	V
$I_D(100\%) =$	18	A
$t_f =$	0,004	$\mu s$

**figure 4. MOSFET**

Turn-on Switching Waveforms & definition of  $t_r$



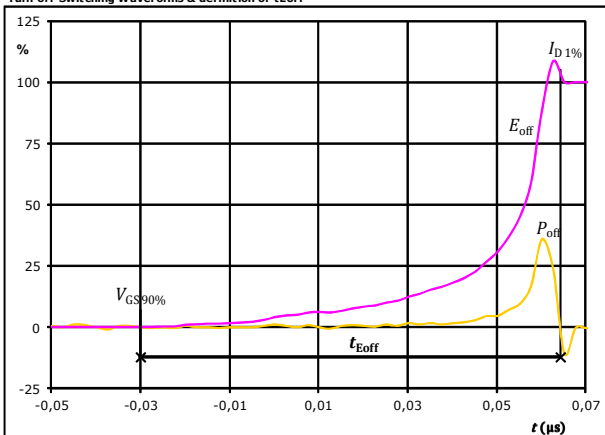
$V_{DS}(100\%) =$	400	V
$I_D(100\%) =$	18	A
$t_r =$	0,004	$\mu s$



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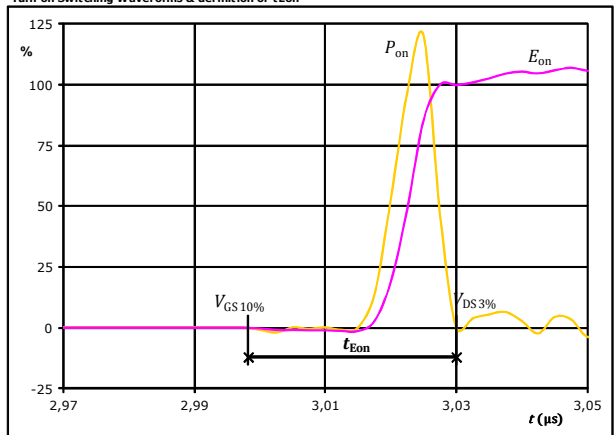
### PFC Switching Definitions

**figure 5.** MOSFET  
Turn-off Switching Waveforms & definition of  $t_{Eoff}$



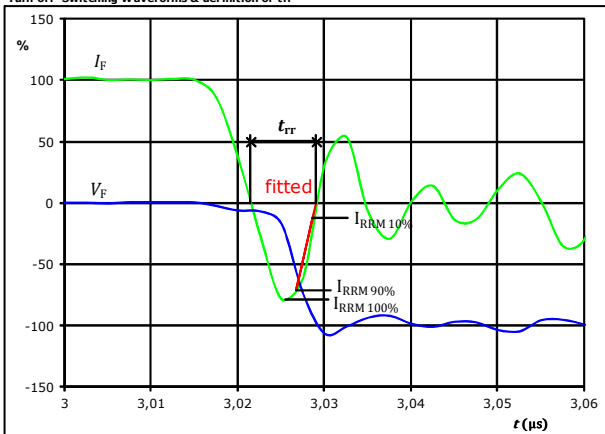
$P_{off}(100\%) = 7,21$  kW  
 $E_{off}(100\%) = 0,02$  mJ  
 $t_{Eoff} = 0,09$  μs

**figure 6.** MOSFET  
Turn-on Switching Waveforms & definition of  $t_{Eon}$



$P_{on}(100\%) = 7,21$  kW  
 $E_{on}(100\%) = 0,06$  mJ  
 $t_{Eon} = 0,03$  μs

**figure 7.** FWD  
Turn-off Switching Waveforms & definition of  $t_{tr}$

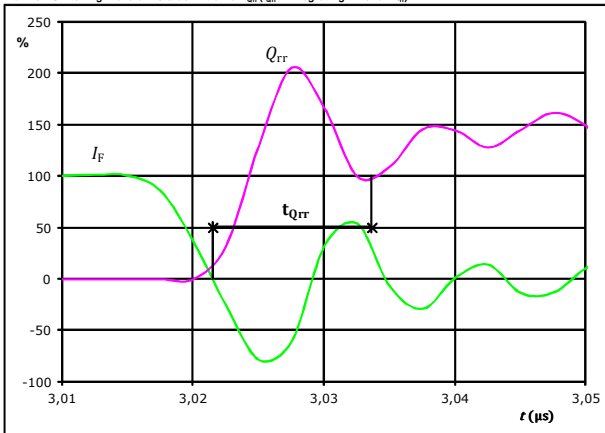


$V_F(100\%) = 400$  V  
 $I_F(100\%) = 18$  A  
 $I_{RRM}(100\%) = -16$  A  
 $t_{tr} = 0,007$  μs



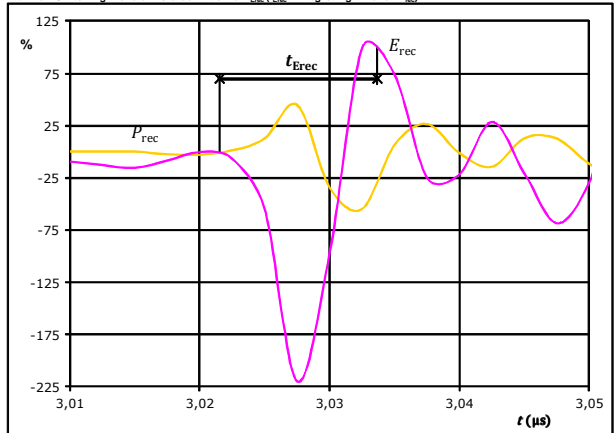
### PFC Switching Definitions

figure 8. FWD  
Turn-on Switching Waveforms & definition of  $t_{Qrr}$  ( $t_{Qrr}$  = integrating time for  $Q_{rr}$ )



$I_F$ (100%) =	18	A
$Q_{rr}$ (100%) =	0,05	$\mu\text{C}$
$t_{Qrr}$ =	0,01	$\mu\text{s}$


figure 9. FWD  
Turn-on Switching Waveforms & definition of  $t_{Erec}$  ( $t_{Erec}$  = integrating time for  $E_{rec}$ )

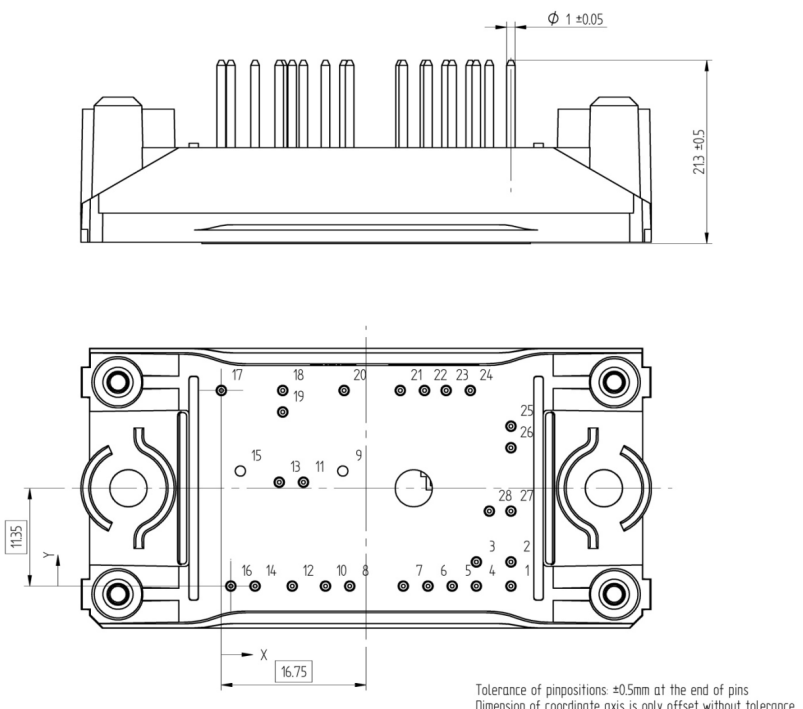


$P_{rec}$ (100%) =	7,21	kW
$E_{rec}$ (100%) =	0,002	mJ
$t_{Erec}$ =	0,01	$\mu\text{s}$



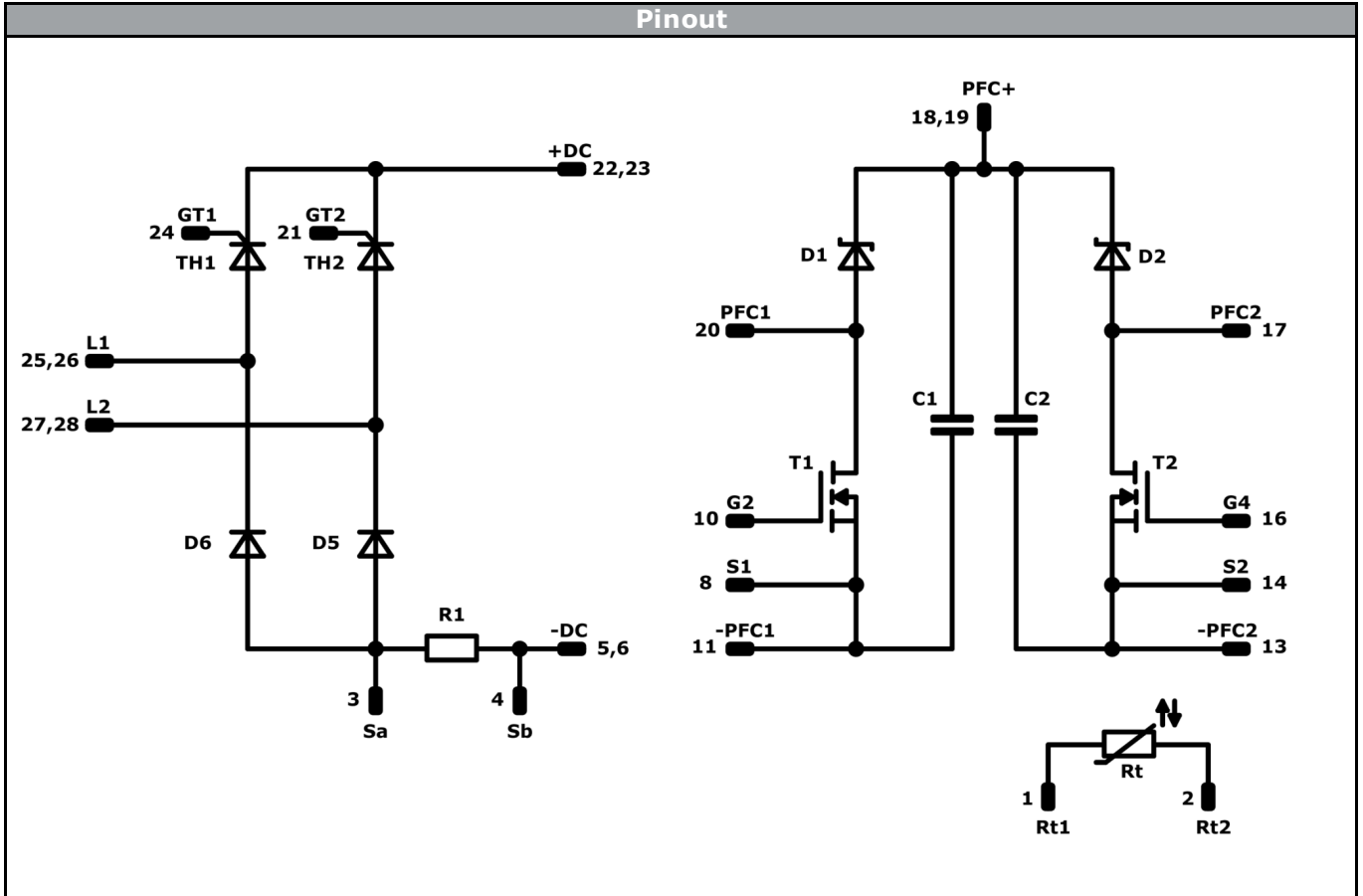
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Ordering Code & Marking						
<b>Version</b>			<b>Ordering Code</b>			
without thermal paste with Solder pins 17mm housing			10-F0062TA099FS-P980D57			
NN-NNNNNNNNNNNNNN TTTTIVV WWYY UL Vinco LLLLL SSSS						
<b>Text</b>	<b>Name</b>	<b>Date code</b>	<b>UL &amp; Vinco</b>	<b>Lot</b>	<b>Serial</b>	
	NN-NNNNNNNNNNNNNN-TTTTIVV	WWYY	UL Vinco	LLLLL	SSSS	
<b>Datamatrix</b>	<b>Type&amp;Ver</b>	<b>Lot number</b>	<b>Serial</b>	<b>Date code</b>		
	TTTTTIVV	LLLLL	SSSS	WWYY		

Pin table [mm]				Outline	
Pin	X	Y	Function	 <p>Tolerance of pinpositions: ±0.5mm at the end of pins Dimension of coordinate axis is only offset without tolerance</p>	
1	33,5	0	Rt1		
2	33,5	2,8	Rt2		
3	29,5	2,8	Sa		
4	29,5	0	Sb		
5	26,7	0	-DC		
6	23,9	0	-DC		
7	21,05	0	N.C.		
8	14,85	0	S1		
9	not assembled				
10	12,05	0	G2		
11	9,5	12,05	-PFC1		
12	8,2	0	N.C.		
13	6,7	12,05	-PFC2		
14	3,9	0	S2		
15	not assembled				
16	1,1	0	G4		
17	0	22,7	PFC2		
18	7,1	22,7	PFC+		
19	7,1	20,2	PFC+		
20	14,2	22,7	PFC1		
21	20,7	22,7	GT2		
22	23,5	22,7	+DC		
23	26	22,7	+DC		
24	28,8	22,7	GT1		
25	33,5	18,55	L1		
26	33,5	16,05	L1		
27	33,5	8,7	L2		
28	31	8,7	L2		



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Identification					
ID	Component	Voltage	Current	Function	Comment
T1, T2	MOSFET	600V	99mΩ	PFC Switch	
D1, D2	FWD	600V	10A	PFC Diode	
D5, D6	Rectifier	1600V	50A	Rectifier Diode	
TH1, TH2	Thyristor	1200V	26A	Rectifier Thyristor	
R1	Resistor			PFC Shunt	
C1, C2	Capacitor	500V		PFC Capacitance	
Rt	NTC			Thermistor	



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

Handling instruction
Handling instructions for <i>flow 0</i> packages see vincotech.com website.

General datasheet
General datasheet for <i>flow 0</i> packages see vincotech.com website.

Document No.:	Date:	Modification:	Pages
10-F0062TA099FS-P980D57-D1-14	14 Dec. 2016		

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.