Final datasheet

EasyPACK™ 2B module and PressFIT / pre-applied thermal interface material / NTC

Features


Typical appearance

- Electrical features
  - V_{CES} = 1200 V
  - $I_{C\ nom}$ = 40 A / I_{CRM} = 80 A
  - Ultra fast IGBT chips
  - Overload operation up to 175°C
  - Low switching losses
  - Low $V_{CE,sat}$
  - Suitable Infineon gate drivers can be found under https://www.infineon.com/gdfinder
- Mechanical features
  - 3 kV AC 1 minute insulation
  - Al_2O_3 substrate with low thermal resistance
  - Compact design
  - PressFIT contact technology
  - Rugged mounting due to integrated mounting clamps
  - Pre-applied thermal interface material

Potential applications

- Three-level applications
- Solar applications

Product validation

- Qualified for industrial applications according to the relevant tests of IEC 60747, 60749 and 60068

Description

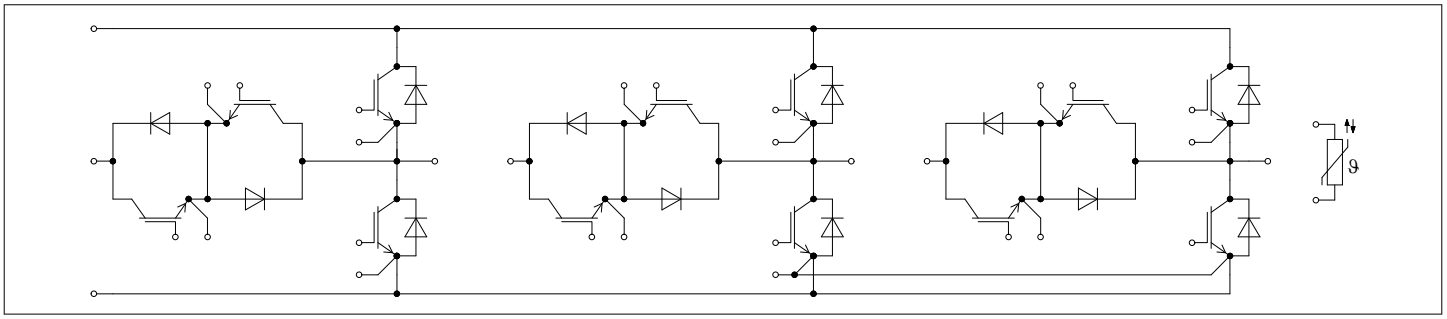


Table of contents

1 Package

Table 1 Insulation coordination

Parameter	Symbol	Note or test condition	Values	Unit
Isolation test voltage	V_{ISOL}	RMS, f = 50 Hz, *t* = 1 min	3.0	kV
Isolation test voltage NTC	$V_{ISOL(NTC)}$	RMS, f = 50 Hz, *t* = 1 min	3.0	kV
Internal isolation		basic insulation (class 1, IEC 61140)	Al_2O_3	
Comparative tracking index	*CTI*		> 225	
Relative thermal index (electrical)	*RTI*	housing	140	°C

Table 2 Characteristic values

Parameter	Symbol	Note or test condition	Values			Unit
			Min.	Typ.	Max.	
Stray inductance module	L_{sCE}			30		nH
Module lead resistance, terminals - chip	$R_{CC'+EE'}$	T_H = 25 °C, per switch		7		mΩ
Storage temperature	T_{stg}		-40		125	°C
Maximum baseplate operation temperature	T_{BPmax}				125	°C
Mounting force per clamp	*F*		40		80	N
Weight	*G*			39		g

***Note**: Storage and shipment of modules with TIM => see AN2012-07*

The current under continuous operation is limited to 25 A rms per connector pin.

2 IGBT, T1-T2 / T5-T6 / T9-T10

Table 3 Maximum rated values

Parameter	Symbol	Note or test condition		Values	Unit
Collector-emitter voltage	V_{CES}		T_{vj} = 25 °C	1200	V
Implemented collector current	I_{CN}			40	A
Continuous DC collector current	I_{CDC}	$T_{vj\,max}$ = 175 °C	T_H = 65 °C	25	A
Repetitive peak collector current	I_{CRM}	t_p limited by $T_{vj\,op}$		80	A
Gate-emitter peak voltage	V_{GES}			±20	V

Table 4 Characteristic values

Parameter	Symbol	Note or test condition		Values			Unit
				Min.	Typ.	Max.	
Collector-emitter saturation voltage	$V_{CE\,sat}$	I_C = 40 A, V_{GE} = 15 V	T_{vj} = 25 °C		1.70	2.25	V
			T_{vj} = 125 °C		1.90		
			T_{vj} = 175 °C		2.00		
Gate threshold voltage	V_{GEth}	I_C = 8.16 mA, V_{CE} = V_{GE}, T_{vj} = 25 °C		4.85	5.5	6.15	V
Gate charge	Q_G	V_{GE} = ±15 V, V_{CC} = 600 V			0.59		µC
Input capacitance	C_{ies}	f = 100 kHz, T_{vj} = 25 °C, V_{CE} = 25 V, V_{GE} = 0 V			4.54		nF
Reverse transfer capacitance	C_{res}	f = 100 kHz, T_{vj} = 25 °C, V_{CE} = 25 V, V_{GE} = 0 V			0.086		nF
Collector-emitter cut-off current	I_{CES}	V_{CE} = 1200 V, V_{GE} = 0 V	T_{vj} = 25 °C			3.5	µA
Gate-emitter leakage current	I_{GES}	V_{CE} = 0 V, V_{GE} = 20 V, T_{vj} = 25 °C				100	nA
Turn-on delay time (inductive load)	t_{don}	I_C = 40 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Gon} = 0.51 Ω	T_{vj} = 25 °C		0.021		µs
			T_{vj} = 125 °C		0.025		
			T_{vj} = 175 °C		0.026		
Rise time (inductive load)	t_r	I_C = 40 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Gon} = 0.51 Ω	T_{vj} = 25 °C		0.017		µs
			T_{vj} = 125 °C		0.020		
			T_{vj} = 175 °C		0.022		
Turn-off delay time (inductive load)	t_{doff}	I_C = 40 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Goff} = 0.62 Ω	T_{vj} = 25 °C		0.110		µs
			T_{vj} = 125 °C		0.140		
			T_{vj} = 175 °C		0.160		
Fall time (inductive load)	t_f	I_C = 40 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Goff} = 0.62 Ω	T_{vj} = 25 °C		0.080		µs
			T_{vj} = 125 °C		0.150		
			T_{vj} = 175 °C		0.180		
Turn-on energy loss per pulse	E_{on}	I_C = 40 A, V_{CC} = 350 V, L_σ = 7 nH, V_{GE} = ±15 V, R_{Gon} = 0.51 Ω, di/dt = 1130 A/ns (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.36		mJ
			T_{vj} = 125 °C		0.51		
			T_{vj} = 175 °C		0.58		
Turn-off energy loss per pulse	E_{off}	I_C = 40 A, V_{CC} = 350 V, L_σ = 7 nH, V_{GE} = ±15 V, R_{Goff} = 0.62 Ω, dv/dt = 5300 V/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.81		mJ
			T_{vj} = 125 °C		1.22		
			T_{vj} = 175 °C		1.45		
Thermal resistance, junction to heat sink	R_{thJH}	per IGBT, Valid with IFX pre-applied Thermal Interface Material				1.68	K/W
Temperature under switching conditions	$T_{vj\,op}$			-40		175	°C

***Note**: Tvj op > 150 °C is only allowed for operation at overload conditions. For detailed specifications please refer to AN 2018-14.*

3 Diode, D1-D2 / D5-D6 / D9-D10

Table 5 Maximum rated values

Parameter	Symbol	Note or test condition		Values	Unit
Repetitive peak reverse voltage	V_{RRM}		T_{vj} = 25 °C	1200	V
Implemented forward current	I_{FN}			40	A
Continuous DC forward current	I_F			25	A
Repetitive peak forward current	I_{FRM}	t_P = 1 ms		80	A
I^2t - value	I^2t	t_P = 10 ms, V_R = 0 V	T_{vj} = 125 °C	61	A^2s
			T_{vj} = 175 °C	35	

Table 6 Characteristic values

Parameter	Symbol	Note or test condition		Values			Unit
				Min.	Typ.	Max.	
Forward voltage	V_F	I_F = 40 A, V_{GE} = 0 V	T_{vj} = 25 °C		2.50	3.05	V
			T_{vj} = 125 °C		2.18		
			T_{vj} = 175 °C		1.98		
Peak reverse recovery current	I_{RM}	V_{CC} = 350 V, I_F = 40 A, V_{GE} = -15 V, -di$_F$/dt = 2.1 kA/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		36.4		A
			T_{vj} = 125 °C		52.2		
			T_{vj} = 175 °C		58.6		
Recovered charge	Q_r	V_{CC} = 350 V, I_F = 40 A, V_{GE} = -15 V, -di$_F$/dt = 2.1 kA/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.68		µC
			T_{vj} = 125 °C		1.61		
			T_{vj} = 175 °C		2.22		
Reverse recovery energy	E_{rec}	V_{CC} = 350 V, I_F = 40 A, V_{GE} = -15 V, -di$_F$/dt = 2.1 kA/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.214		mJ
			T_{vj} = 125 °C		0.503		
			T_{vj} = 175 °C		0.647		
Thermal resistance, junction to heat sink	R_{thJH}	per diode, Valid with IFX pre-applied Thermal Interface Material				2.07	K/W
Temperature under switching conditions	$T_{vj\,op}$			-40		175	°C

***Note**: Tvj op > 150 °C is only allowed for operation at overload conditions. For detailed specifications please refer to AN 2018-14.*

4 IGBT, T3-T4 / T7-T8 / T11-T12

Table 7 Maximum rated values

Parameter	Symbol	Note or test condition		Values	Unit
Collector-emitter voltage	V_{CES}		T_{vj} = 25 °C	650	V
Implemented collector current	I_{CN}			35	A
Continuous DC collector current	I_{CDC}	$T_{vj\,max}$ = 175 °C	T_H = 65 °C	20	A
Repetitive peak collector current	I_{CRM}	t_p limited by $T_{vj\,op}$		70	A
Gate-emitter peak voltage	V_{GES}			±20	V

Table 8 Characteristic values

Parameter	Symbol	Note or test condition		Values			Unit
				Min.	Typ.	Max.	
Collector-emitter saturation voltage	$V_{CE\,sat}$	I_C = 35 A, V_{GE} = 15 V	T_{vj} = 25 °C		1.42	1.90	V
			T_{vj} = 125 °C		1.53		
			T_{vj} = 175 °C		1.62		
Gate threshold voltage	V_{GEth}	I_C = 6.5 mA, V_{CE} = V_{GE}, T_{vj} = 25 °C		3.25	4	4.75	V
Gate charge	Q_G	V_{GE} = ±15 V, V_{CC} = 400 V			0.143		µC
Input capacitance	C_{ies}	f = 100 kHz, T_{vj} = 25 °C, V_{CE} = 25 V, V_{GE} = 0 V			25.2		nF
Reverse transfer capacitance	C_{res}	f = 100 kHz, T_{vj} = 25 °C, V_{CE} = 25 V, V_{GE} = 0 V			0.078		nF
Collector-emitter cut-off current	I_{CES}	V_{CE} = 650 V, V_{GE} = 0 V	T_{vj} = 25 °C			24	µA
Gate-emitter leakage current	I_{GES}	V_{CE} = 0 V, V_{GE} = 20 V, T_{vj} = 25 °C				100	nA
Turn-on delay time (inductive load)	t_{don}	I_C = 35 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Gon} = 1.5 Ω	T_{vj} = 25 °C		0.010		µs
			T_{vj} = 125 °C		0.011		
			T_{vj} = 175 °C		0.012		
Rise time (inductive load)	t_r	I_C = 35 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Gon} = 1.5 Ω	T_{vj} = 25 °C		0.013		µs
			T_{vj} = 125 °C		0.015		
			T_{vj} = 150 °C		0.015		
Turn-off delay time (inductive load)	t_{doff}	I_C = 35 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Goff} = 1.5 Ω	T_{vj} = 25 °C		0.075		µs
			T_{vj} = 125 °C		0.092		
			T_{vj} = 175 °C		0.099		

(table continues...)

Table 8 (continued) Characteristic values

Parameter	Symbol	Note or test condition		Values			Unit
				Min.	Typ.	Max.	
Fall time (inductive load)	t_f	I_C = 35 A, V_{CC} = 350 V, V_{GE} = ±15 V, R_{Goff} = 1.5 Ω	T_{vj} = 25 °C		0.036		µs
			T_{vj} = 125 °C		0.051		
			T_{vj} = 175 °C		0.071		
Turn-on energy loss per pulse	E_{on}	I_C = 35 A, V_{CC} = 350 V, L_σ = 7 nH, V_{GE} = ±15 V, R_{Gon} = 1.5 Ω, di/dt = 1790 A/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.13		mJ
			T_{vj} = 125 °C		0.2		
			T_{vj} = 175 °C		0.26		
Turn-off energy loss per pulse	E_{off}	I_C = 35 A, V_{CC} = 350 V, L_σ = 7 nH, V_{GE} = ±15 V, R_{Goff} = 1.5 Ω, dv/dt = 7570 V/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.432		mJ
			T_{vj} = 125 °C		0.625		
			T_{vj} = 175 °C		0.737		
Thermal resistance, junction to heat sink	R_{thJH}	per IGBT, Valid with IFX pre-applied Thermal Interface Material				2.59	K/W
Temperature under switching conditions	$T_{vj\,op}$			-40		175	°C

5 Diode, D3-D4 / D7-D8 / D11-D12

Table 9 Maximum rated values

Parameter	Symbol	Note or test condition		Values	Unit
Repetitive peak reverse voltage	V_{RRM}		T_{vj} = 25 °C	650	V
Implemented forward current	I_{FN}			50	A
Continuous DC forward current	I_F			25	A
Repetitive peak forward current	I_{FRM}	t_P = 1 ms		100	A
I^2t - value	I^2t	t_P = 10 ms, V_R = 0 V	T_{vj} = 125 °C	87	A^2s
			T_{vj} = 175 °C	69.7	

Table 10 Characteristic values

Parameter	Symbol	Note or test condition		Values			Unit
				Min.	Typ.	Max.	
Forward voltage	V_F	I_F = 50 A, V_{GE} = 0 V	T_{vj} = 25 °C		1.65	2.15	V
			T_{vj} = 125 °C		1.55		
			T_{vj} = 175 °C		1.45		

(table continues...)

Table 10 (continued) Characteristic values

Parameter	Symbol	Note or test condition		Values			Unit
				Min.	Typ.	Max.	
Peak reverse recovery current	I_{RM}	V_{CC} = 350 V, I_F = 50 A, -di$_F$/dt = 1430 A/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		25.4		A
			T_{vj} = 125 °C		33.3		
			T_{vj} = 175 °C		37.8		
Recovered charge	Q_r	V_{CC} = 350 V, I_F = 50 A, -di$_F$/dt = 1430 A/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.9		µC
			T_{vj} = 125 °C		1.71		
			T_{vj} = 175 °C		2.22		
Reverse recovery energy	E_{rec}	V_{CC} = 350 V, I_F = 50 A, -di$_F$/dt = 1430 A/µs (T_{vj} = 175 °C)	T_{vj} = 25 °C		0.223		mJ
			T_{vj} = 125 °C		0.428		
			T_{vj} = 175 °C		0.555		
Thermal resistance, junction to heat sink	R_{thJH}	per diode, Valid with IFX pre-applied Thermal Interface Material				1.83	K/W
Temperature under switching conditions	$T_{vj\,op}$			-40		175	°C

6 NTC-Thermistor

Table 11 Characteristic values

Parameter	Symbol	Note or test condition	Values			Unit
			Min.	Typ.	Max.	
Rated resistance	R_{25}	T_{NTC} = 25 °C		5		kΩ
Deviation of R_{100}	$\Delta R/R$	T_{NTC} = 100 °C, R_{100} = 493 Ω	-5		5	%
Power dissipation	P_{25}	T_{NTC} = 25 °C			20	mW
B-value	$B_{25/50}$	$R_2 = R_{25} \exp[B_{25/50}(1/T_2-1/(298{,}15\ K))]$		3375		K
B-value	$B_{25/80}$	$R_2 = R_{25} \exp[B_{25/80}(1/T_2-1/(298{,}15\ K))]$		3411		K
B-value	$B_{25/100}$	$R_2 = R_{25} \exp[B_{25/100}(1/T_2-1/(298{,}15\ K))]$		3433		K

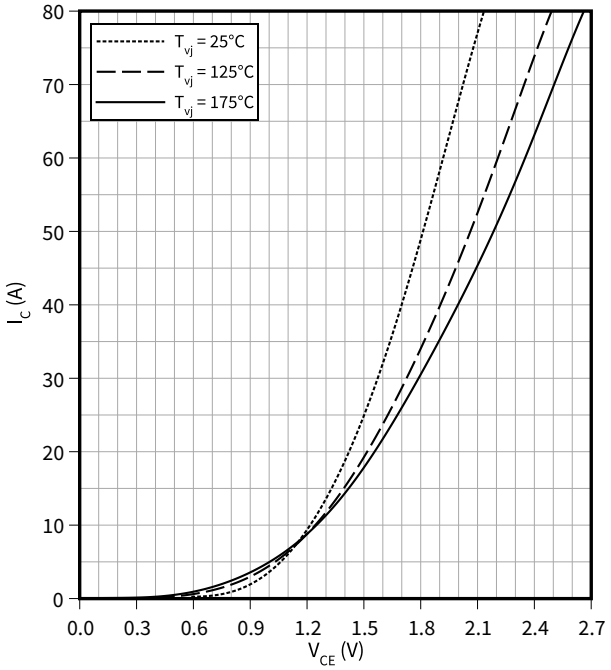
***Note**: For an analytical description of the NTC characteristics please refer to AN2009-10, chapter 4*

7 Characteristics diagrams

Output characteristic (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$I_C = f(V_{CE})$

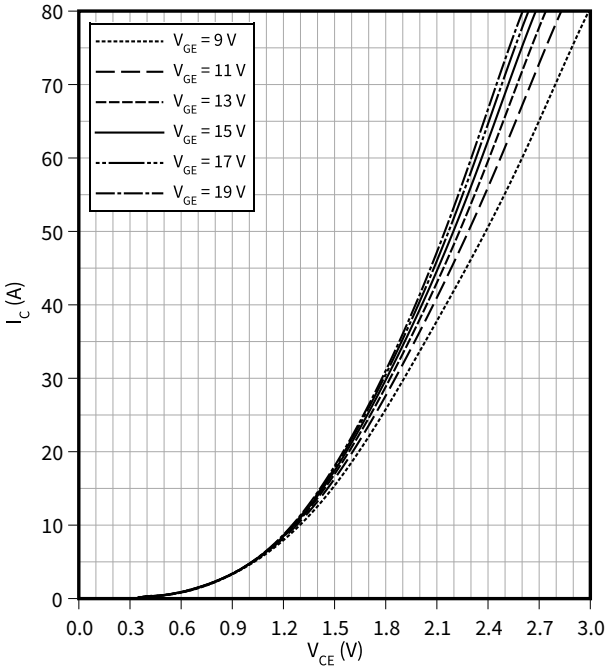
V_{GE} = 15 V



Output characteristic field (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$I_C = f(V_{CE})$

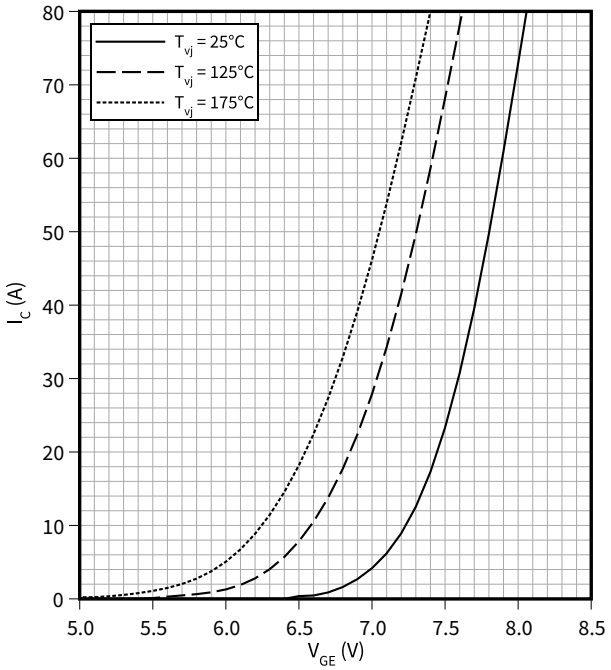
T_{vj} = 175 °C



Transfer characteristic (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$I_C = f(V_{GE})$

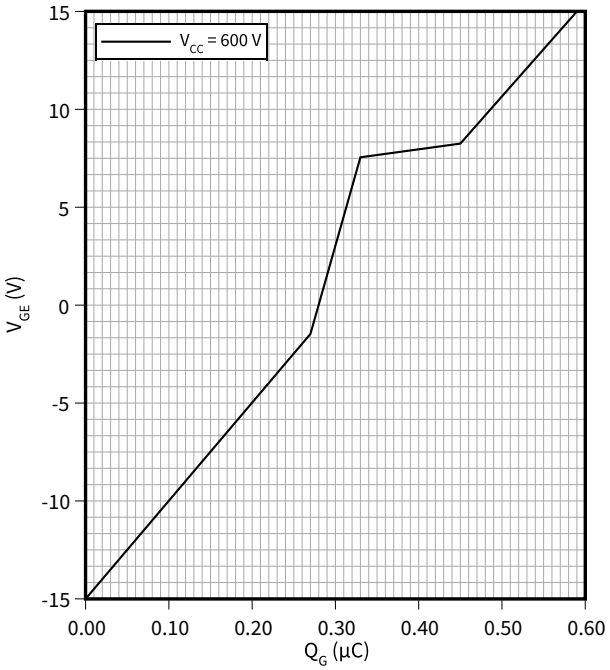
V_{CE} = 20 V



Gate charge characteristic (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$V_{GE} = f(Q_G)$

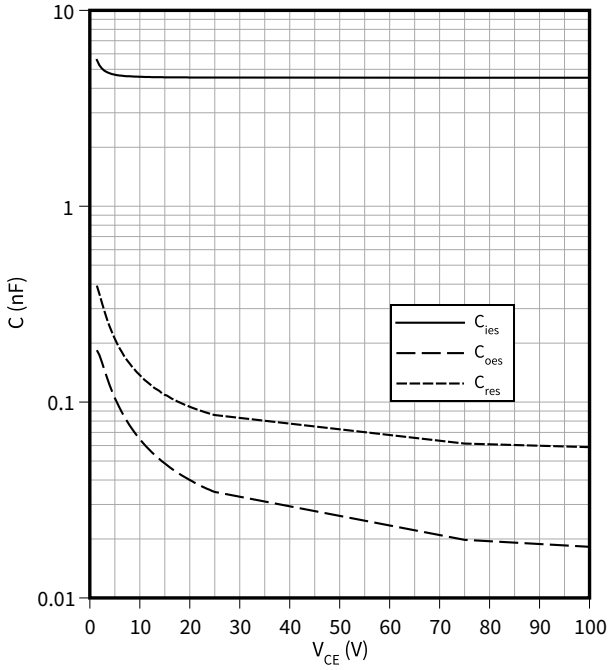
I_C = 40 A, T_{vj} = 25 °C



Capacity characteristic (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$C = f(V_{CE})$

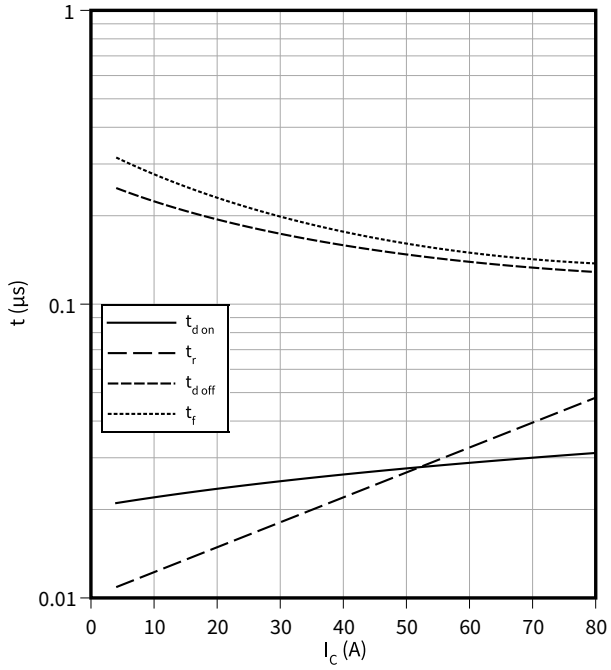
$f = 100\ kHz$, $V_{GE} = 0\ V$, $T_{vj} = 25\ °C$



Switching times (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$t = f(I_C)$

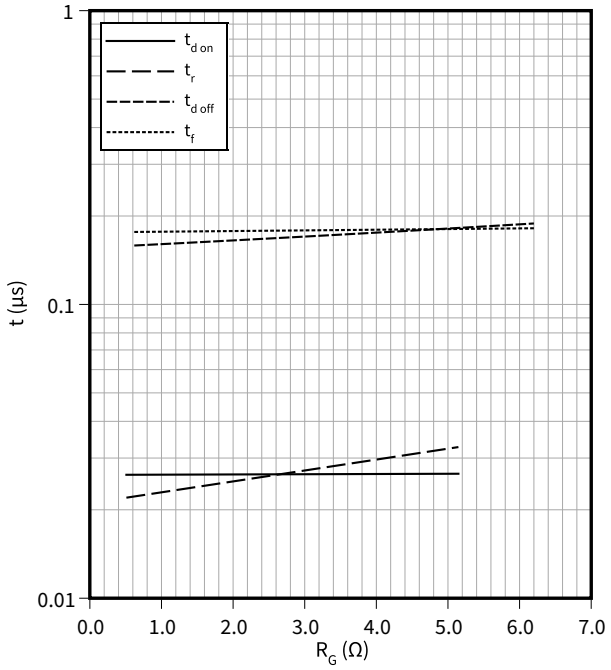
$V_{CC} = 350\ V$, $R_{Goff} = 0.62\ \Omega$, $R_{Gon} = 0.51\ \Omega$, $V_{GE} = \pm 15\ V$, $T_{vj} = 175\ °C$



Switching times (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$t = f(R_G)$

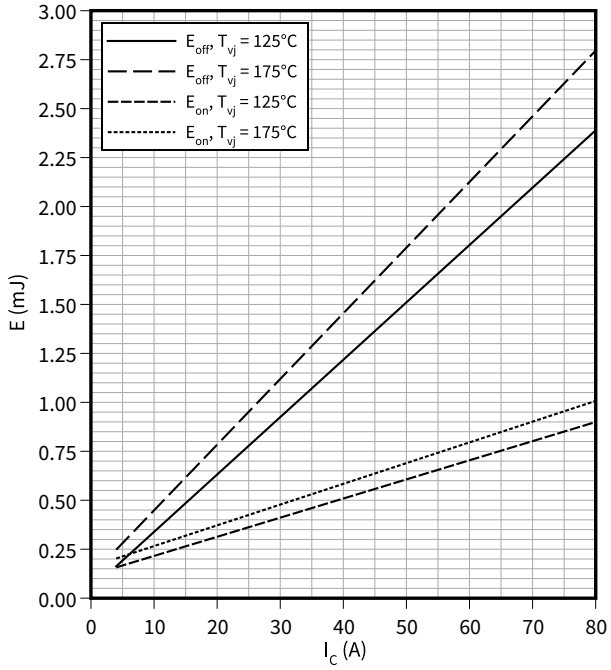
$V_{GE} = \pm 15\ V$, $I_C = 40\ A$, $V_{CC} = 350\ V$, $T_{vj} = 175\ °C$



Switching losses (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$E = f(I_C)$

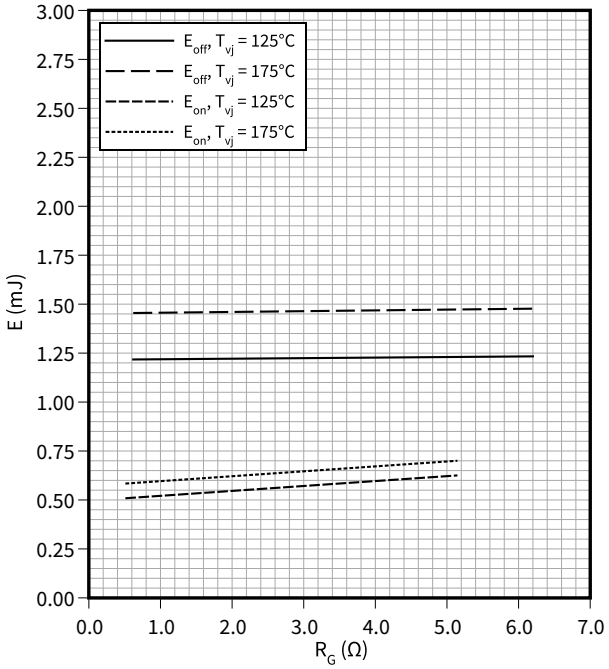
$R_{Goff} = 0.62\ \Omega$, $R_{Gon} = 0.51\ \Omega$, $V_{CC} = 350\ V$, $V_{GE} = \pm\ 15\ V$



Switching losses (typical), IGBT, T1-T2 / T5-T6 / T9-T10

$E = f(R_G)$

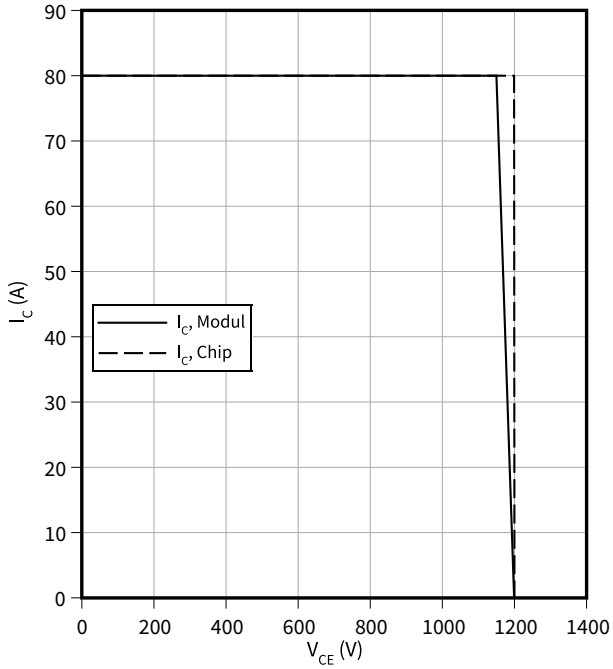
$I_C = 40$ A, $V_{CC} = 350$ V, $V_{GE} = \pm 15$ V



Reverse bias safe operating area (RBSOA), IGBT, T1-T2 / T5-T6 / T9-T10

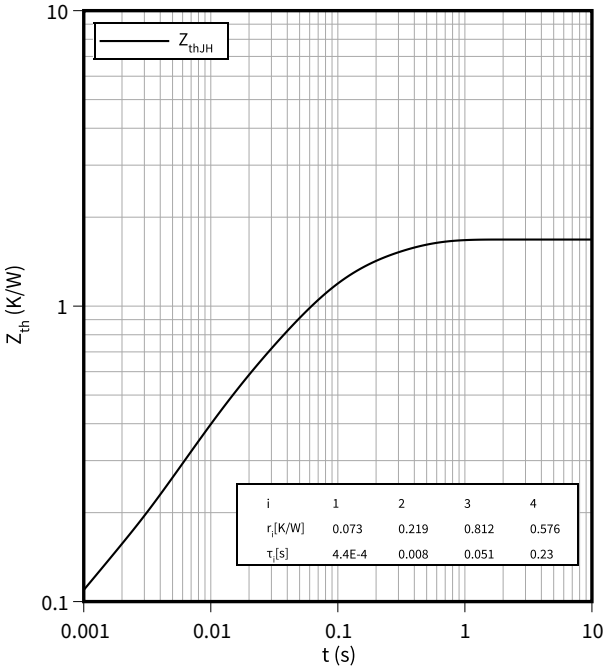
$I_C = f(V_{CE})$

$R_{Goff} = 0.62\ \Omega$, $V_{GE} = \pm 15$ V, $T_{vj} = 175$ °C



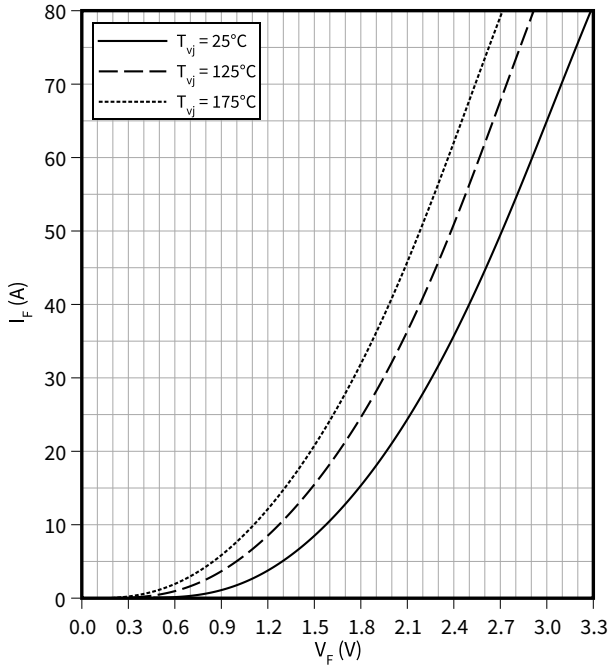
Transient thermal impedance, IGBT, T1-T2 / T5-T6 / T9-T10

$Z_{th} = f(t)$



Forward characteristic (typical), Diode, D1-D2 / D5-D6 / D9-D10

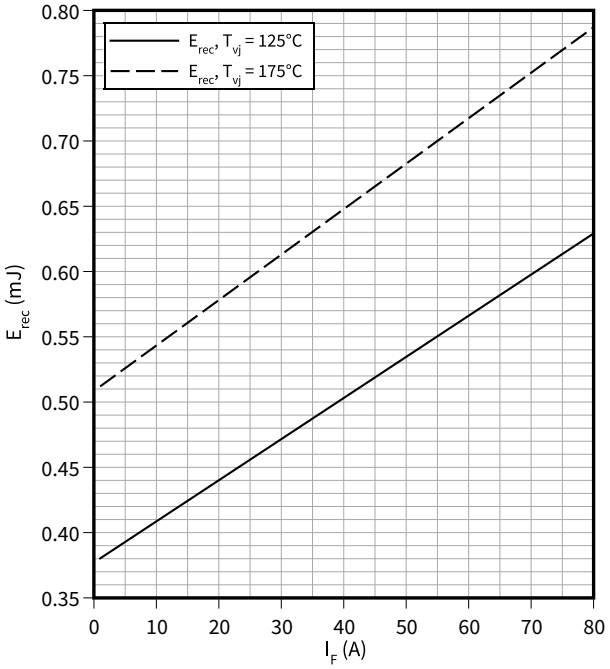
$I_F = f(V_F)$



Switching losses (typical), Diode, D1-D2 / D5-D6 / D9-D10

$E_{rec} = f(I_F)$

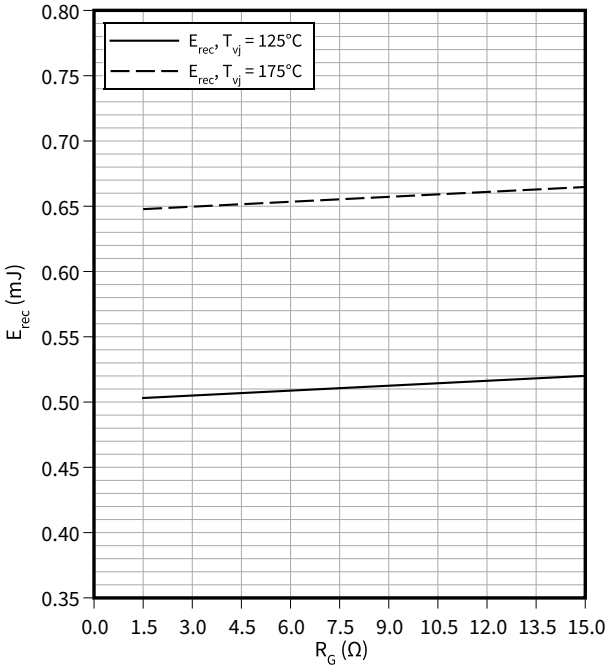
$V_{CE} = 350\ V$, $R_G = 1.5\ \Omega$



Switching losses (typical), Diode, D1-D2 / D5-D6 / D9-D10

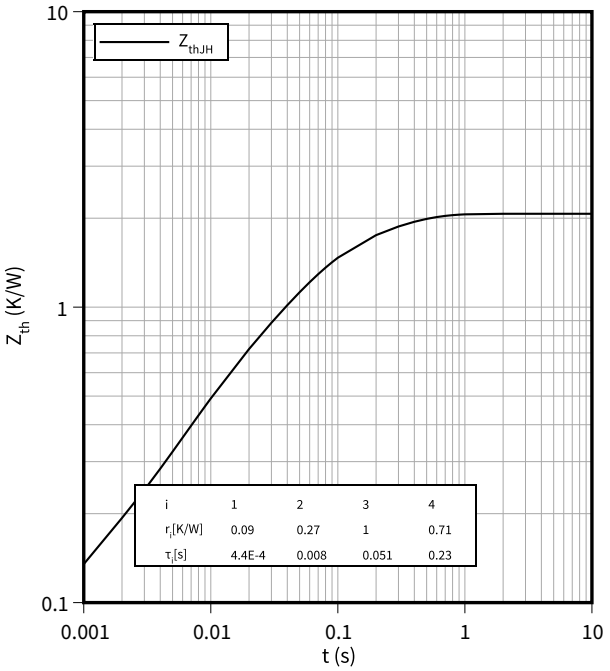
$E_{rec} = f(R_G)$

$V_{CE} = 350\ V$, $I_F = 40\ A$



Transient thermal impedance, Diode, D1-D2 / D5-D6 / D9-D10

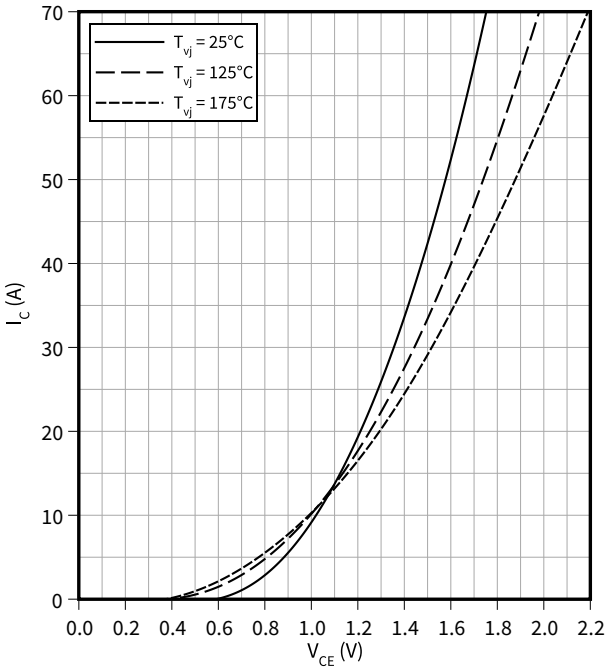
$Z_{th} = f(t)$



Output characteristic (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$I_C = f(V_{CE})$

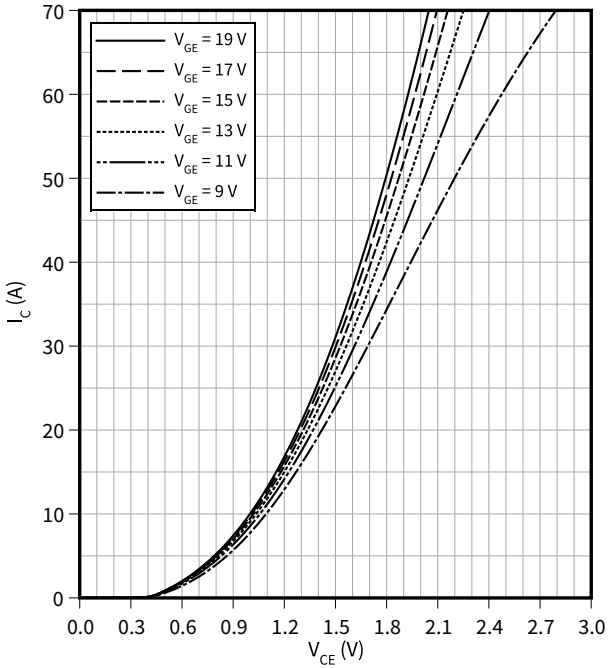
$V_{GE} = 15\ V$



Output characteristic field (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$I_C = f(V_{CE})$

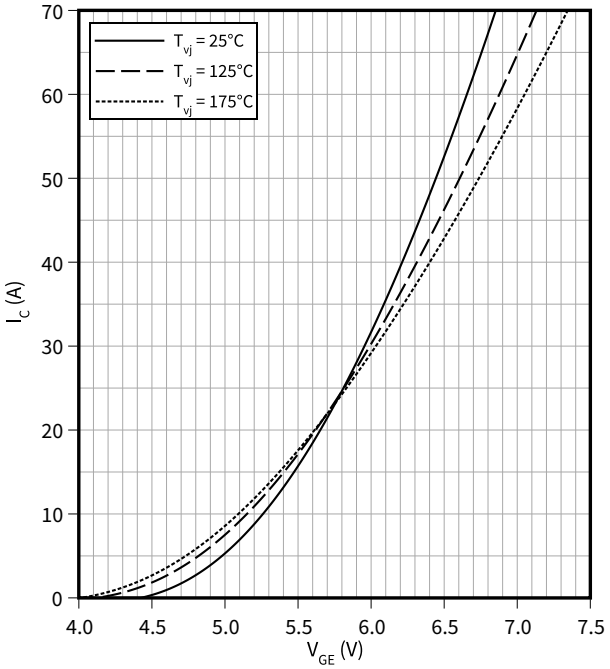
$T_{vj} = 175\ °C$



Transfer characteristic (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$I_C = f(V_{GE})$

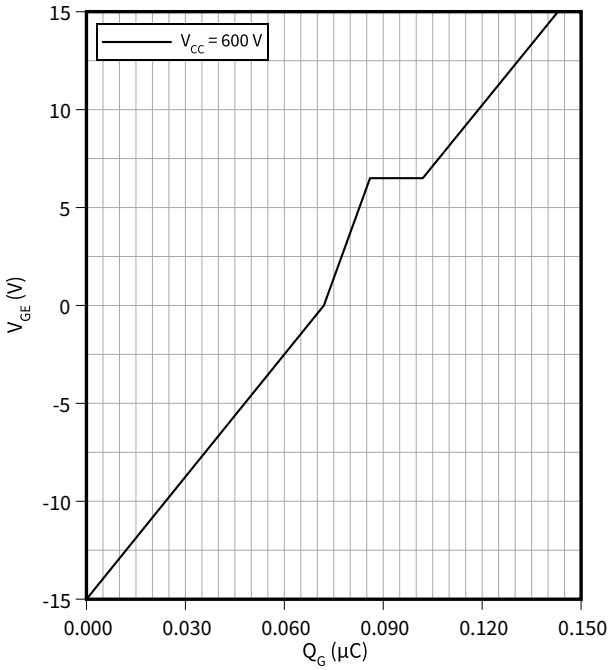
$V_{CE} = 20\ V$



Gate charge characteristic (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$V_{GE} = f(Q_G)$

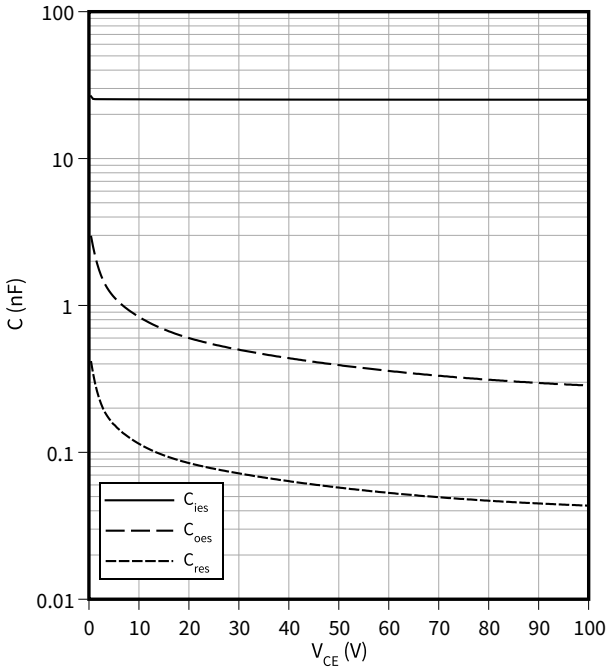
$I_C = 35\ A,\ T_{vj} = 25\ °C$



Capacity characteristic (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$C = f(V_{CE})$

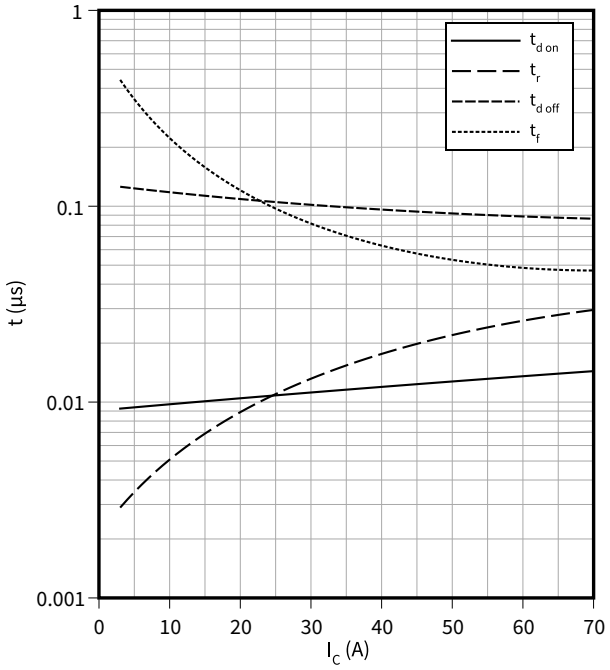
$f = 100\ kHz,\ V_{GE} = 0\ V,\ T_{vj} = 25\ °C$



Switching times (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$t = f(I_C)$

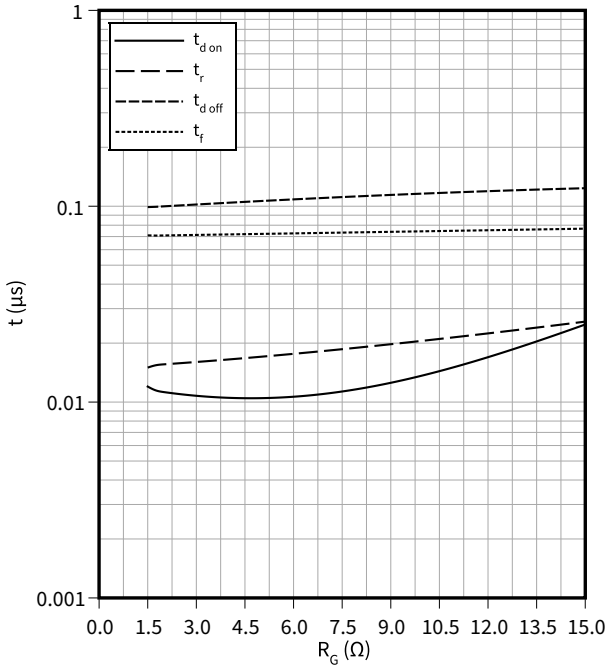
$R_{Goff} = 1.5\ \Omega$, $R_{Gon} = 1.5\ \Omega$, $V_{GE} = \pm 15$ V, $V_{CC} = 350$ V



Switching times (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$t = f(R_G)$

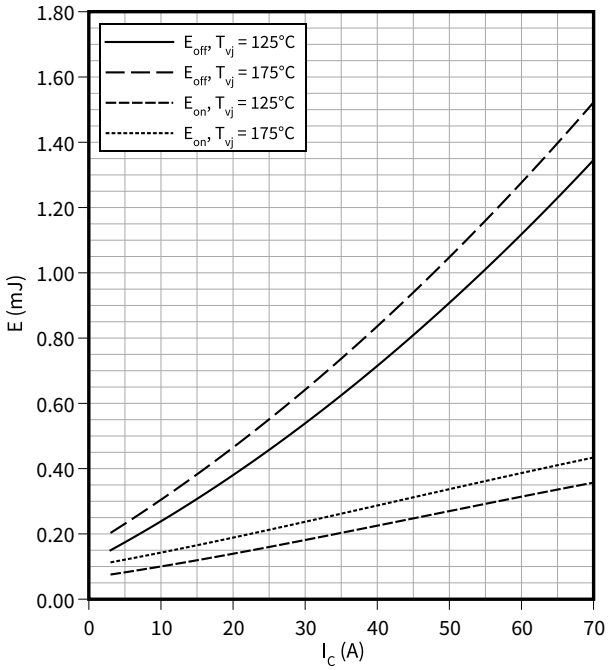
$V_{GE} = \pm 15$ V, $I_C = 35$ A, $V_{CC} = 350$ V



Switching losses (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$E = f(I_C)$

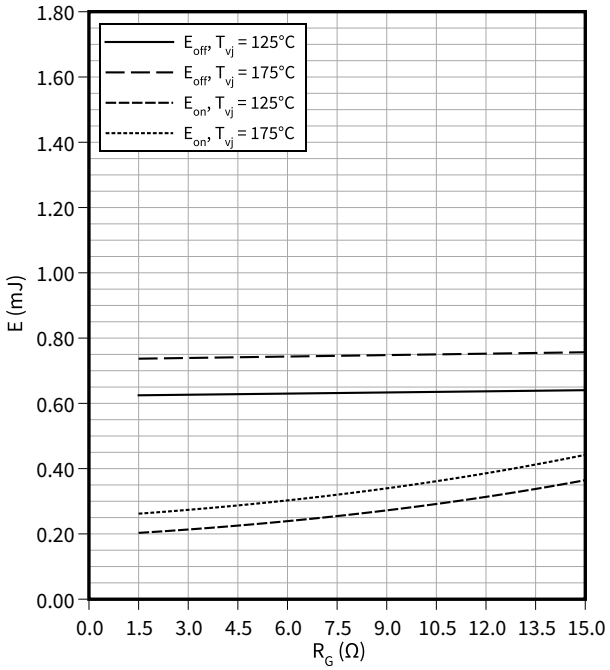
$R_{Goff} = 1.5\ \Omega$, $R_{Gon} = 1.5\ \Omega$, $V_{CC} = 350$ V, $V_{GE} = \pm 15$ V



Switching losses (typical), IGBT, T3-T4 / T7-T8 / T11-T12

$E = f(R_G)$

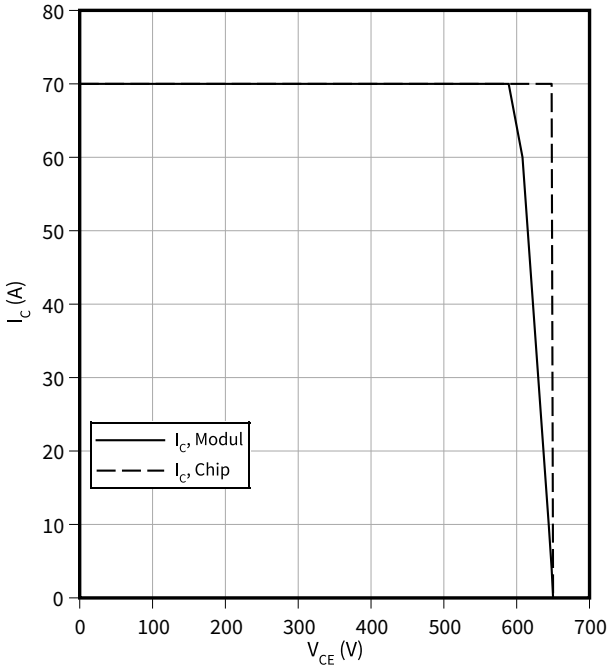
$I_C = 35$ A, $V_{CC} = 350$ V, $V_{GE} = \pm 15$ V



Reverse bias safe operating area (RBSOA), IGBT, T3-T4 / T7-T8 / T11-T12

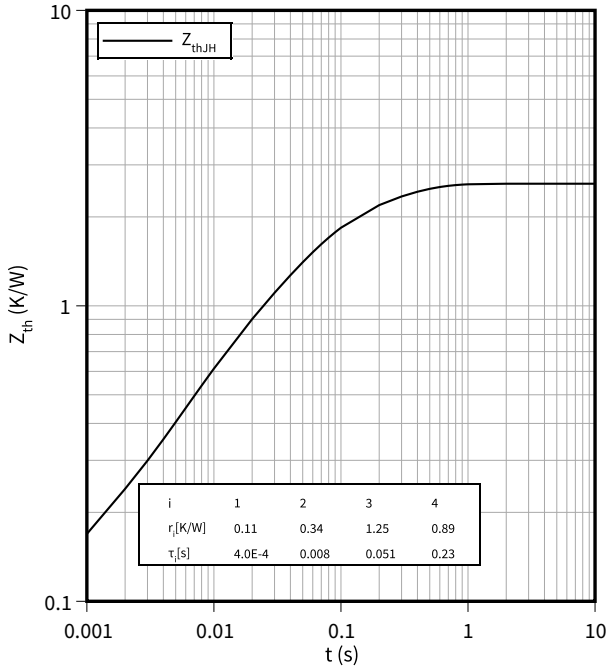
$I_C = f(V_{CE})$

$R_{Goff} = 1.5\ \Omega$, $V_{GE} = \pm 15$ V, $T_{vj} = 175$ °C



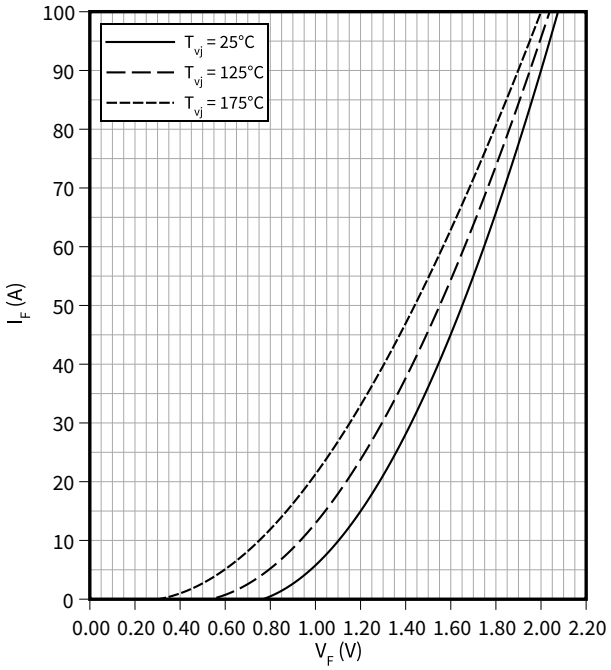
Transient thermal impedance, IGBT, T3-T4 / T7-T8 / T11-T12

$Z_{th} = f(t)$



Forward characteristic (typical), Diode, D3-D4 / D7-D8 / D11-D12

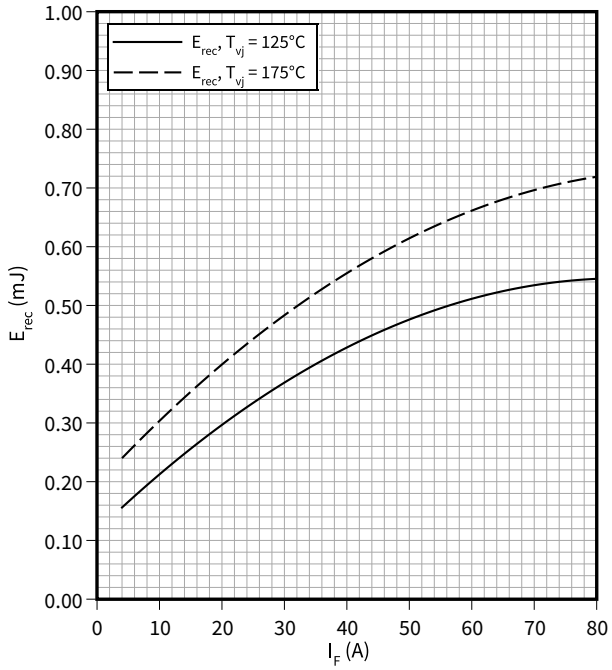
$I_F = f(V_F)$



Switching losses (typical), Diode, D3-D4 / D7-D8 / D11-D12

$E_{rec} = f(I_F)$

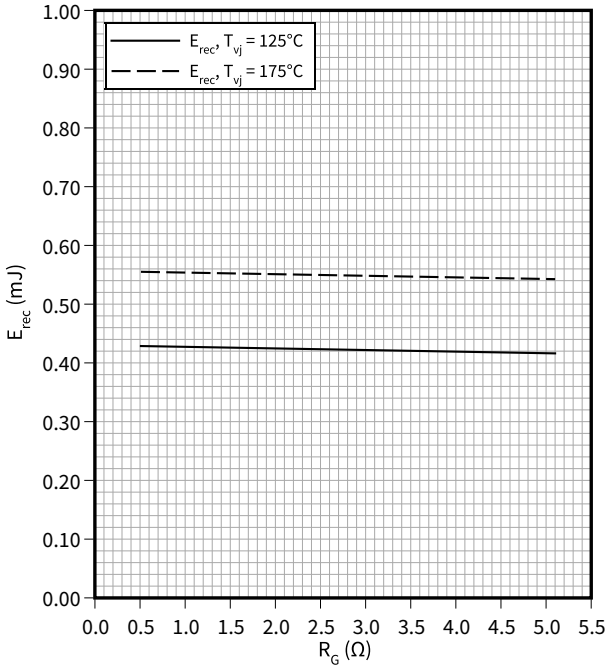
$V_{CE} = 350$ V, $R_G = 0.51\ \Omega$



Switching losses (typical), Diode, D3-D4 / D7-D8 / D11-D12

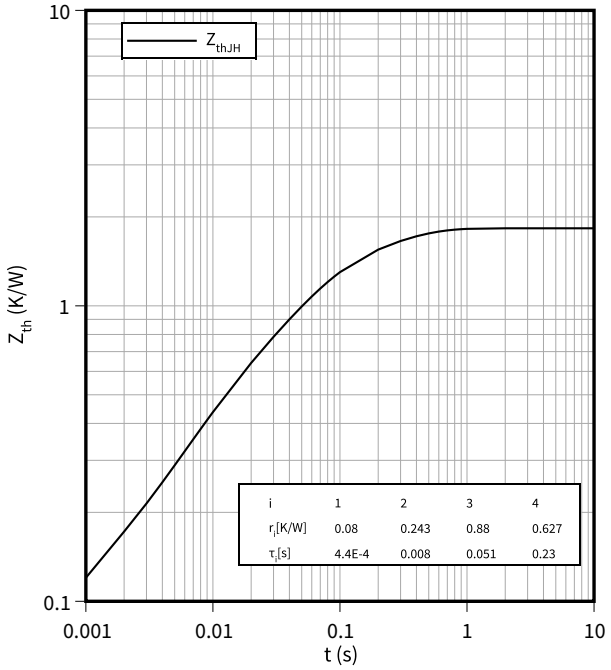
$E_{rec} = f(R_G)$

$V_{CE} = 350\ V$, $I_F = 50\ A$



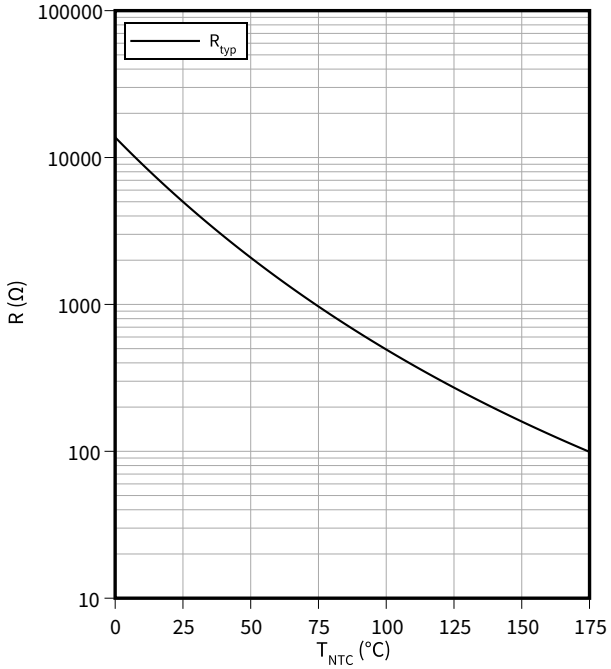
Transient thermal impedance, Diode, D3-D4 / D7-D8 / D11-D12

$Z_{th} = f(t)$



Temperature characteristic (typical), NTC-Thermistor

$R = f(T_{NTC})$



8 Circuit diagram

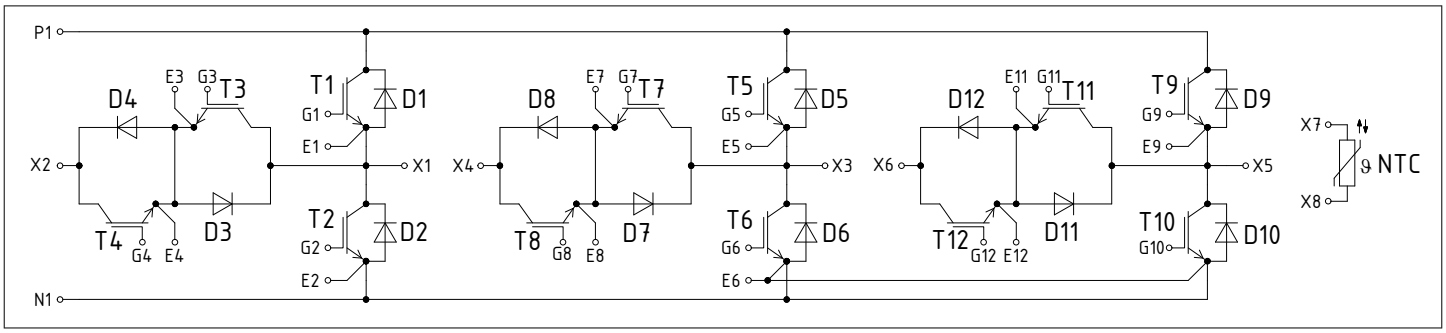


Figure 1

9 Package outlines

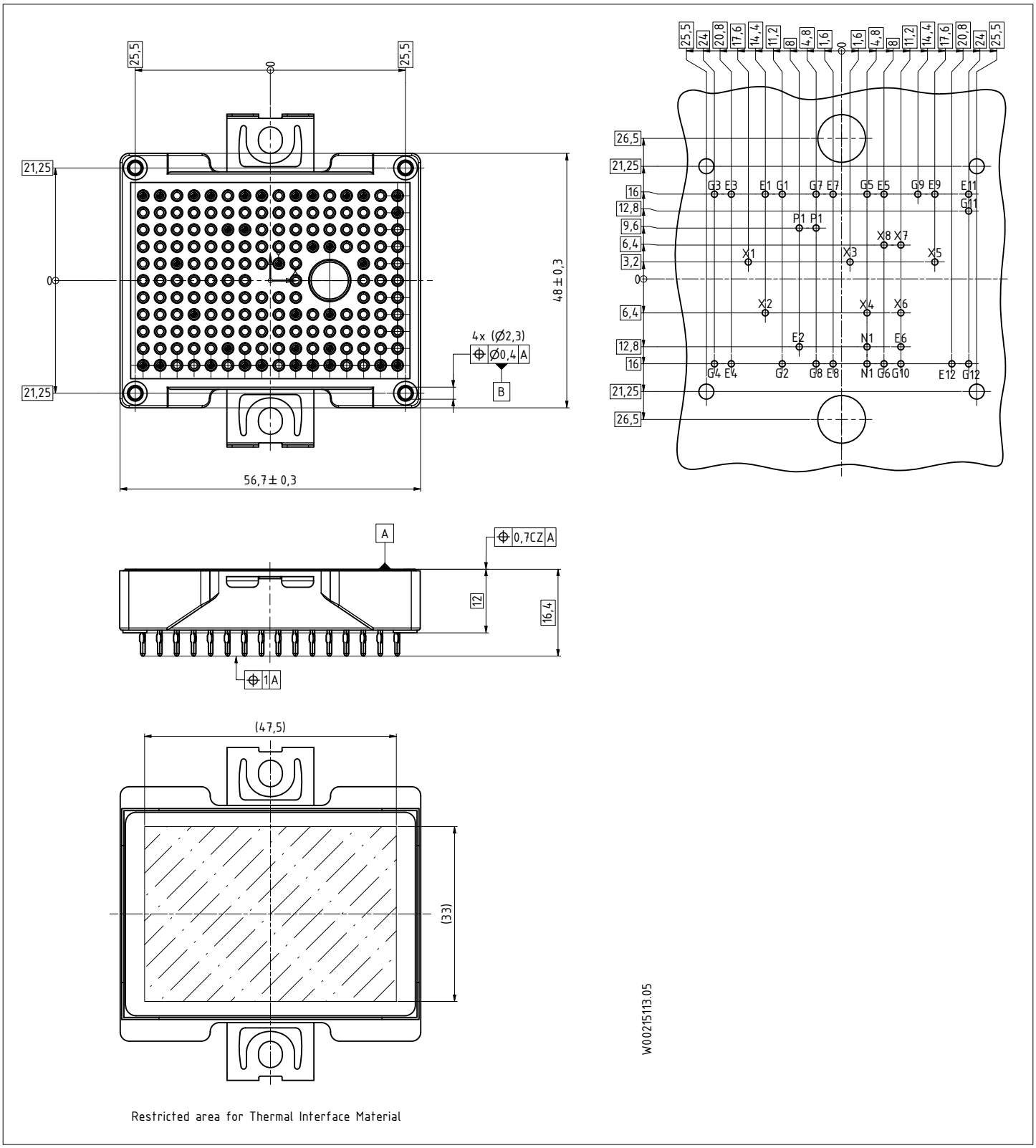


Figure 2

10 Module label code

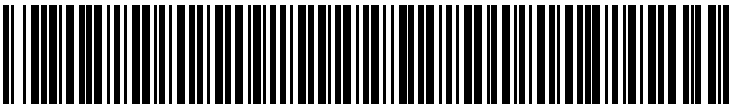
Module label code			
Code format	Data Matrix		Barcode Code128
Encoding	ASCII text		Code Set A
Symbol size	16x16		23 digits
Standard	IEC24720 and IEC16022		IEC8859-1
Code content	*Content* Module serial number Module material number Production order number Date code (production year) Date code (production week)	*Digit* 1 – 5 6 - 11 12 - 19 20 – 21 22 – 23	*Example* 71549 142846 55054991 15 30
Example	 71549142846550549911530	 71549142846550549911530	

Figure 3

Revision history

Document revision	Date of release	Description of changes
0.10	2023-01-26	Initial version
1.00	2023-12-12	Final datasheet

Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

Edition 2023-12-12

Published by

Infineon Technologies AG

81726 Munich, Germany

Do you have a question about any aspect of this document?

Email: erratum@infineon.com

Document reference
IFX-ABF403-002

Important notice

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie").

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer's compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer's products and any use of the product of Infineon Technologies in customer's applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

Warnings

Due to technical requirements products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by Infineon Technologies in a written document signed by authorized representatives of Infineon Technologies, Infineon Technologies' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.