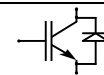


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Vorläufige Daten
Preliminary data

Elektrische Eigenschaften / Electrical properties

Höchstzulässige Werte / Maximum rated values

Diode Gleichrichter/ Diode Rectifier

Periodische Rückw. Spitzensperrspannung repetitive peak reverse voltage		V_{RRM}	1600	V
Gleichrichter Ausgang Grenzeffektivstrom maximum RMS current at Rectifier output		I_{RMSmax}	t.b.d.	A
Dauergleichstrom DC forward current	$T_C = 80^\circ\text{C}$	I_d	75	A
Stoßstrom Grenzwert surge forward current	$t_p = 10\text{ ms}, T_{vj} = 25^\circ\text{C}$	I_{FSM}	500	A
	$t_p = 10\text{ ms}, T_{vj} = 150^\circ\text{C}$		400	A
Grenzlastintegral I^2t - value	$t_p = 10\text{ ms}, T_{vj} = 25^\circ\text{C}$	I^2t	1250	A^2s
	$t_p = 10\text{ ms}, T_{vj} = 150^\circ\text{C}$		800	A^2s

Transistor Wechselrichter/ Transistor Inverter

Kollektor-Emitter-Sperrspannung collector-emitter voltage		V_{CES}	1200	V
Kollektor-Dauergleichstrom DC-collector current	$T_C = 80^\circ\text{C}$	$I_{C,nom.}$ I_C	75	A
	$T_C = 25^\circ\text{C}$		105	A
Periodischer Kollektor Spitzenstrom repetitive peak collector current	$t_p = 1\text{ ms}, T_C = 80^\circ\text{C}$	I_{CRM}	150	A
Gesamt-Verlustleistung total power dissipation	$T_C = 25^\circ\text{C}$	P_{tot}	350	W
Gate-Emitter-Spitzenspannung gate-emitter peak voltage		V_{GES}	+/- 20V	V

Diode Wechselrichter/ Diode Inverter

Dauergleichstrom DC forward current	$T_C = 80^\circ\text{C}$	I_F	75	A
Periodischer Spitzenstrom repetitive peak forw. current	$t_p = 1\text{ ms}$	I_{FRM}	150	A
Grenzlastintegral I^2t - value	$V_R = 0\text{V}, t_p = 10\text{ms}, T_{vj} = 125^\circ\text{C}$	I^2t	1.190	A^2s

Transistor Brems-Chopper/ Transistor Brake-Chopper

Kollektor-Emitter-Sperrspannung collector-emitter voltage		V_{CES}	1200	V
Kollektor-Dauergleichstrom DC-collector current	$T_C = 80^\circ\text{C}$	$I_{C,nom.}$ I_C	40	A
	$T_C = 25^\circ\text{C}$		55	A
Periodischer Kollektor Spitzenstrom repetitive peak collector current	$t_p = 1\text{ ms}, T_C = 80^\circ\text{C}$	I_{CRM}	80	A
Gesamt-Verlustleistung total power dissipation	$T_C = 25^\circ\text{C}$	P_{tot}	200	W
Gate-Emitter-Spitzenspannung gate-emitter peak voltage		V_{GES}	+/- 20V	V

Diode Brems-Chopper/ Diode Brake-Chopper

Dauergleichstrom DC forward current	$T_C = 80^\circ\text{C}$	I_F	25	A
Periodischer Spitzenstrom repetitive peak forw. current	$t_p = 1\text{ ms}$	I_{FRM}	50	A

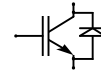
prepared by: Andreas Schulz	date of publication:06.03.2001
approved by: Hornkamp	revision: 1

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Modul Isolation/ Module Isolation

Isolations-Prüfspannung insulation test voltage	RMS, f = 50 Hz, t = 1 min. NTC connected to Baseplate	V _{ISOL}	2,5	kV
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Elektrische Eigenschaften / Electrical properties

Charakteristische Werte / Characteristic values

Diode Gleichrichter/ Diode Rectifier

			min.	typ.	max.	
Durchlaßspannung forward voltage	T _{vj} = 150°C, I _F = 75 A	V _F	-	1,15	-	V
Schleusenspannung threshold voltage	T _{vj} = 150°C	V _(TO)	-	-	0,8	V
Ersatzwiderstand slope resistance	T _{vj} = 150°C	r _T	-	-	6,5	mΩ
Sperrstrom reverse current	T _{vj} = 150°C, V _R = 1600 V	I _R	-	3	-	mA
Modul Leitungswiderstand, Anschlüsse-Chip lead resistance, terminals-chip	T _C = 25°C	R _{AA'+CC'}	-	4	-	mΩ

Transistor Wechselrichter/ Transistor Inverter

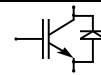
			min.	typ.	max.	
Kollektor-Emitter Sättigungsspannung collector-emitter saturation voltage	V _{GE} = 15V, T _{vj} = 25°C, I _C = 75 A	V _{CE sat}	-	1,7	2,2	V
	V _{GE} = 15V, T _{vj} = 125°C, I _C = 75 A		-	2	-	V
Gate-Schwellenspannung gate threshold voltage	V _{CE} = V _{GE} , T _{vj} = 25°C, I _C = 3,0 mA	V _{GE(TO)}	5,0	5,8	6,5	V
Eingangskapazität input capacitance	f = 1MHz, T _{vj} = 25°C V _{CE} = 25 V, V _{GE} = 0 V	C _{ies}	-	5,3	-	nF
Kollektor-Emitter Reststrom collector-emitter cut off current	V _{GE} = 0V, T _{vj} = 25°C, V _{CE} = 1200 V	I _{CES}	-	-	5	mA
Gate-Emitter Reststrom gate-emitter leakage current	V _{CE} = 0V, V _{GE} = 20V, T _{vj} = 25°C	I _{GES}	-	-	400	nA
Einschaltverzögerungszeit (ind. Last) turn on delay time (inductive load)	I _C = I _{Nenn} , V _{CC} = 600 V	t _{d,on}	-	260	-	ns
	V _{GE} = ±15V, T _{vj} = 25°C, R _G = 5 Ohm					
	V _{GE} = ±15V, T _{vj} = 125°C, R _G = 5 Ohm					
Anstiegszeit (induktive Last) rise time (inductive load)	I _C = I _{Nenn} , V _{CC} = 600 V	t _r	-	30	-	ns
	V _{GE} = ±15V, T _{vj} = 25°C, R _G = 5 Ohm					
	V _{GE} = ±15V, T _{vj} = 125°C, R _G = 5 Ohm					
Abschaltverzögerungszeit (ind. Last) turn off delay time (inductive load)	I _C = I _{Nenn} , V _{CC} = 600 V	t _{d,off}	-	420	-	ns
	V _{GE} = ±15V, T _{vj} = 25°C, R _G = 5 Ohm					
	V _{GE} = ±15V, T _{vj} = 125°C, R _G = 5 Ohm					
Fallzeit (induktive Last) fall time (inductive load)	I _C = I _{Nenn} , V _{CC} = 600 V	t _f	-	65	-	ns
	V _{GE} = ±15V, T _{vj} = 25°C, R _G = 5 Ohm					
	V _{GE} = ±15V, T _{vj} = 125°C, R _G = 5 Ohm					
Einschaltverlustenergie pro Puls turn-on energy loss per pulse	I _C = I _{Nenn} , V _{CC} = 600 V V _{GE} = ±15V, T _{vj} = 125°C, R _G = 5 Ohm L _S = 45 nH	E _{on}	-	9,4	-	mWs
Abschaltverlustenergie pro Puls turn-off energy loss per pulse	I _C = I _{Nenn} , V _{CC} = 600 V V _{GE} = ±15V, T _{vj} = 125°C, R _G = 5 Ohm L _S = 45 nH	E _{off}	-	9,4	-	mWs
Kurzschlußverhalten SC Data	t _P ≤ 10µs, V _{GE} ≤ 15V, R _G = 5 Ohm T _{vj} ≤ 125°C, V _{CC} = 720 V	I _{SC}	-	300	-	A

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Elektrische Eigenschaften / Electrical properties

Charakteristische Werte / Characteristic values

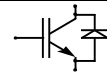
		min.	typ.	max.		
Modulinduktivität stray inductance module		L_{GCE}	-	-	100	nH
Modul Leitungswiderstand, Anschlüsse-Chip lead resistance, terminals-chip	$T_C = 25^\circ\text{C}$	$R_{\text{CC}'+\text{EE}'}$	-	7	-	m Ω
Diode Wechselrichter/ Diode Inverter		min.	typ.	max.		
Durchlaßspannung forward voltage	$V_{\text{GE}} = 0\text{V}, T_{\text{vj}} = 25^\circ\text{C}, I_{\text{F}} = 75\text{A}$ $V_{\text{GE}} = 0\text{V}, T_{\text{vj}} = 125^\circ\text{C}, I_{\text{F}} = 75\text{A}$	V_{F}	-	1,65	2,2	V
Rückstromspitze peak reverse recovery current	$I_{\text{F}}=I_{\text{Nenn}}, -di_{\text{F}}/dt = 2000\text{A}/\mu\text{s}$ $V_{\text{GE}} = -10\text{V}, T_{\text{vj}} = 25^\circ\text{C}, V_{\text{R}} = 600\text{V}$ $V_{\text{GE}} = -10\text{V}, T_{\text{vj}} = 125^\circ\text{C}, V_{\text{R}} = 600\text{V}$	I_{RM}	-	80	-	A
Sperrverzögerungsladung recovered charge	$I_{\text{F}}=I_{\text{Nenn}}, -di_{\text{F}}/dt = 2000\text{A}/\mu\text{s}$ $V_{\text{GE}} = -10\text{V}, T_{\text{vj}} = 25^\circ\text{C}, V_{\text{R}} = 600\text{V}$ $V_{\text{GE}} = -10\text{V}, T_{\text{vj}} = 125^\circ\text{C}, V_{\text{R}} = 600\text{V}$	Q_{r}	-	9,3	-	μAs
Abschaltenergie pro Puls reverse recovery energy	$I_{\text{F}}=I_{\text{Nenn}}, -di_{\text{F}}/dt = 2000\text{A}/\mu\text{s}$ $V_{\text{GE}} = -10\text{V}, T_{\text{vj}} = 25^\circ\text{C}, V_{\text{R}} = 600\text{V}$ $V_{\text{GE}} = -10\text{V}, T_{\text{vj}} = 125^\circ\text{C}, V_{\text{R}} = 600\text{V}$	E_{RQ}	-	3,2	-	mWs
Transistor Brems-Chopper/ Transistor Brake-Chopper		min.	typ.	max.		
Kollektor-Emitter Sättigungsspannung collector-emitter saturation voltage	$V_{\text{GE}} = 15\text{V}, T_{\text{vj}} = 25^\circ\text{C}, I_{\text{C}} = 40\text{A}$ $V_{\text{GE}} = 15\text{V}, T_{\text{vj}} = 125^\circ\text{C}, I_{\text{C}} = 40\text{A}$	$V_{\text{CE sat}}$	-	1,8	2,3	V
Gate-Schwellenspannung gate threshold voltage	$V_{\text{CE}} = V_{\text{GE}}, T_{\text{vj}} = 25^\circ\text{C}, I_{\text{C}} = 1,5\text{mA}$	$V_{\text{GE(TO)}}$	5,0	5,8	6,5	V
Eingangskapazität input capacitance	$f = 1\text{MHz}, T_{\text{vj}} = 25^\circ\text{C}$ $V_{\text{CE}} = 25\text{V}, V_{\text{GE}} = 0\text{V}$	C_{ies}	-	2,5	-	nF
Kollektor-Emitter Reststrom collector-emitter cut off current	$V_{\text{GE}} = 0\text{V}, T_{\text{vj}} = 25^\circ\text{C}, V_{\text{CE}} = 1200\text{V}$	I_{CES}	-	5,0	-	mA
Gate-Emitter Reststrom gate-emitter leakage current	$V_{\text{CE}} = 0\text{V}, V_{\text{GE}} = 20\text{V}, T_{\text{vj}} = 25^\circ\text{C}$	I_{GES}	-	-	400	nA
Schaltverluste und -bedingungen Switching losses and conditions	siehe Wechselrichter in Dbl FP40R12KE3 see inverter in datasheet FP40R12KE3					
Diode Brems-Chopper/ Diode Brake-Chopper		min.	typ.	max.		
Durchlaßspannung forward voltage	$T_{\text{vj}} = 25^\circ\text{C}, I_{\text{F}} = 40\text{A}$ $T_{\text{vj}} = 125^\circ\text{C}, I_{\text{F}} = 40\text{A}$	V_{F}	-	2,35	2,8	V
Schaltverluste und -bedingungen Switching losses and conditions	siehe Wechselrichter in Dbl FP25R12KE3 see inverter in datasheet FP25R12KE3					
NTC-Widerstand/ NTC-Thermistor		min.	typ.	max.		
Nennwiderstand rated resistance	$T_C = 25^\circ\text{C}$	R_{25}	-	5	-	k Ω
Abweichung von R_{100} deviation of R_{100}	$T_C = 100^\circ\text{C}, R_{100} = 493\ \Omega$	$\Delta R/R$	-5		5	%
Verlustleistung power dissipation	$T_C = 25^\circ\text{C}$	P_{25}			20	mW
B-Wert B-value	$R_2 = R_1 \exp [B(1/T_2 - 1/T_1)]$	$B_{25/50}$		3375		K

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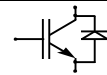
Vorläufige Daten Preliminary data

Thermische Eigenschaften / Thermal properties

				min.	typ.	max.	
Innerer Wärmewiderstand thermal resistance, junction to case	Gleichr. Diode/ Rectif. Diode	R_{thJC}	-	-	0,65	K/W	
	Trans. Wechr./ Trans. Inverter		-	-	0,35	K/W	
	Diode Wechr./ Diode Inverter		-	-	0,58	K/W	
	Trans. Bremse/ Trans. Brake		-	-	0,6	K/W	
	Diode Bremse/ Diode Brake		-	-	1,2	K/W	
Übergangs-Wärmewiderstand thermal resistance, case to heatsink	Gleichr. Diode/ Rectif. Diode	R_{thCK}	-	0,04	-	K/W	
	Trans. Wechr./ Trans. Inverter		-	0,02	-	K/W	
	Diode Wechr./ Diode Inverter		-	0,04	-	K/W	
Höchstzulässige Sperrschichttemperatur maximum junction temperature		T_{vj}	-	-	150	°C	
Betriebstemperatur operation temperature		T_{op}	-40	-	125	°C	
Lagertemperatur storage temperature		T_{stg}	-40	-	125	°C	

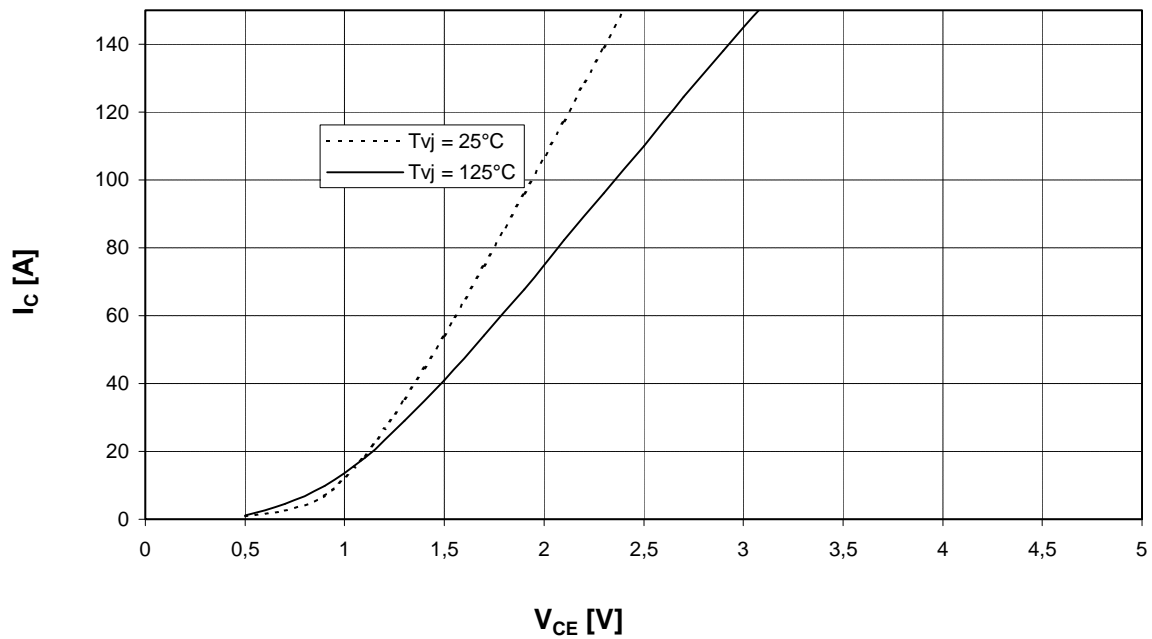
Mechanische Eigenschaften / Mechanical properties

Innere Isolation internal insulation				Al_2O_3	
CTI comperative tracking index				225	
Anzugsdrehmoment f. mech. Befestigung mounting torque		M		3 ±10%	Nm
Gewicht weight		G		300	g

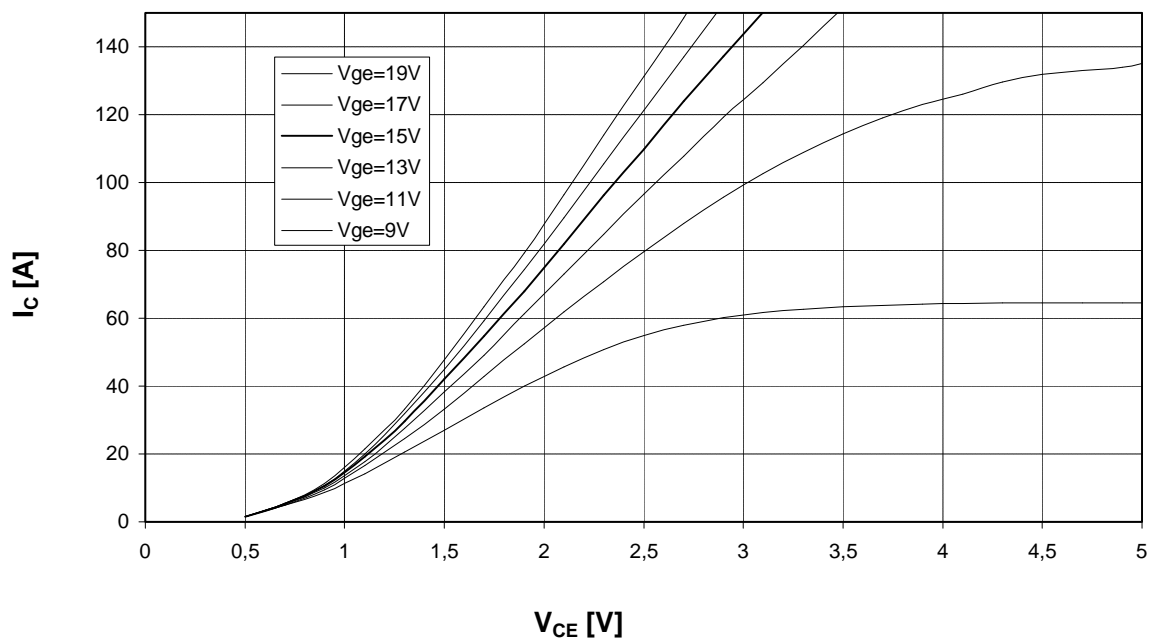


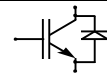
Vorläufige Daten
Preliminary data

Ausgangskennlinienfeld Wechselr. (typisch) $I_C = f(V_{CE})$
Output characteristic Inverter (typical) $V_{GE} = 15\text{ V}$



Ausgangskennlinienfeld Wechselr. (typisch) $I_C = f(V_{CE})$
Output characteristic Inverter (typical) $T_{vj} = 125^\circ\text{C}$

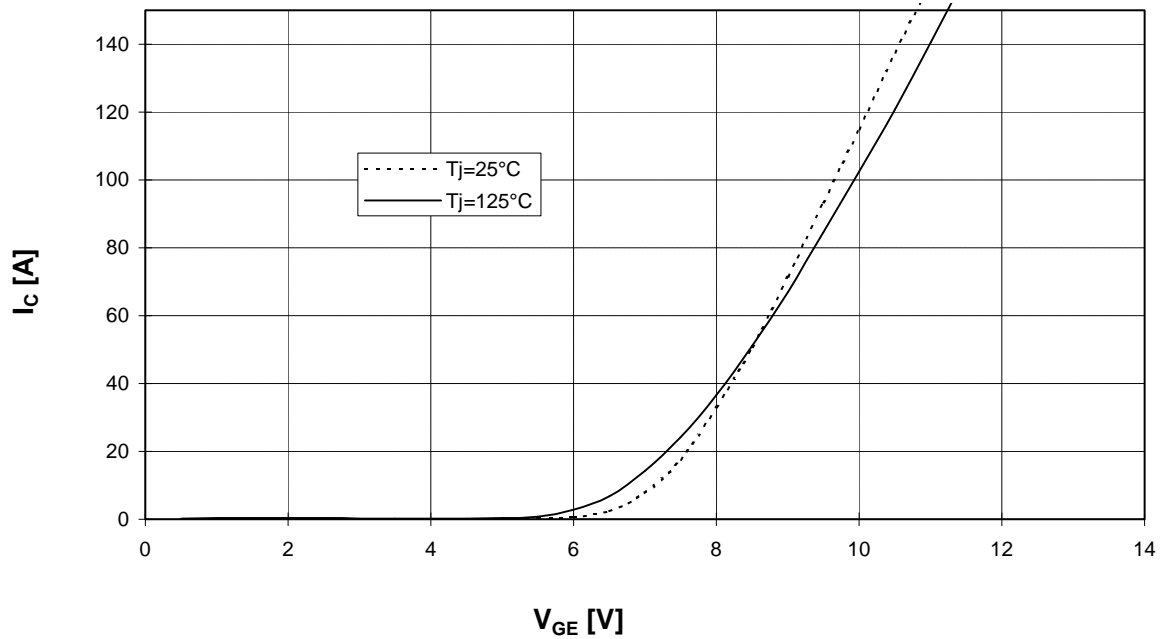




Vorläufige Daten
Preliminary data

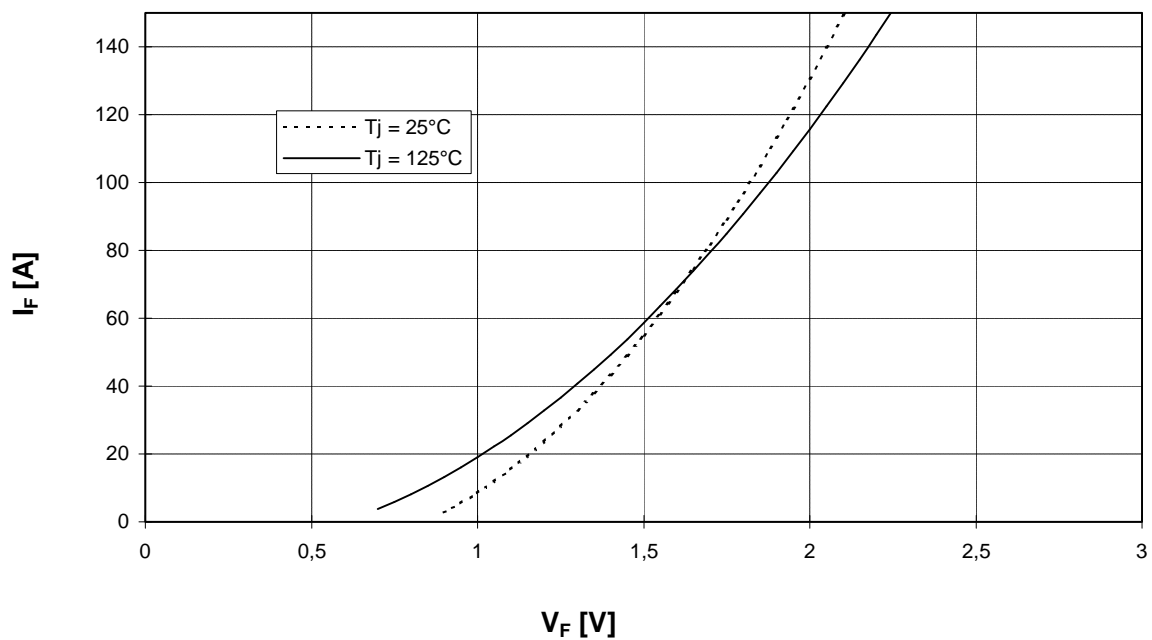
Übertragungscharakteristik Wechselr. (typisch)
Transfer characteristic Inverter (typical)

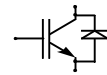
$I_C = f(V_{GE})$
 $V_{CE} = 20\text{ V}$



Durchlaßkennlinie der Freilaufdiode Wechselr. (typisch)
Forward characteristic of FWD Inverter (typical)

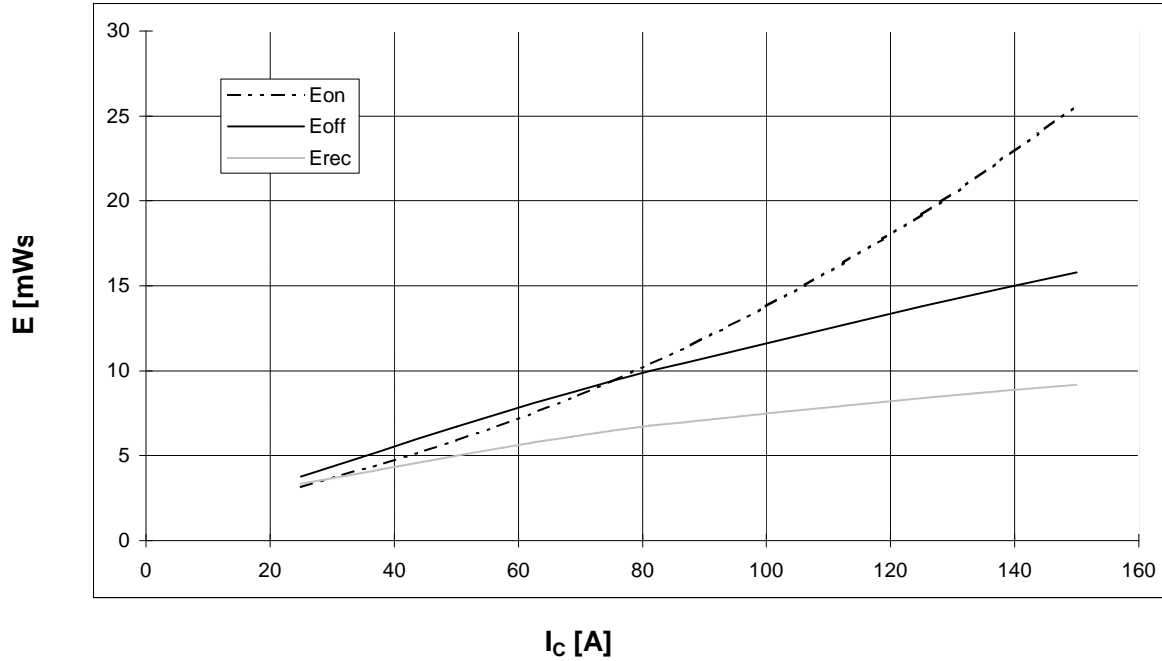
$I_F = f(V_F)$



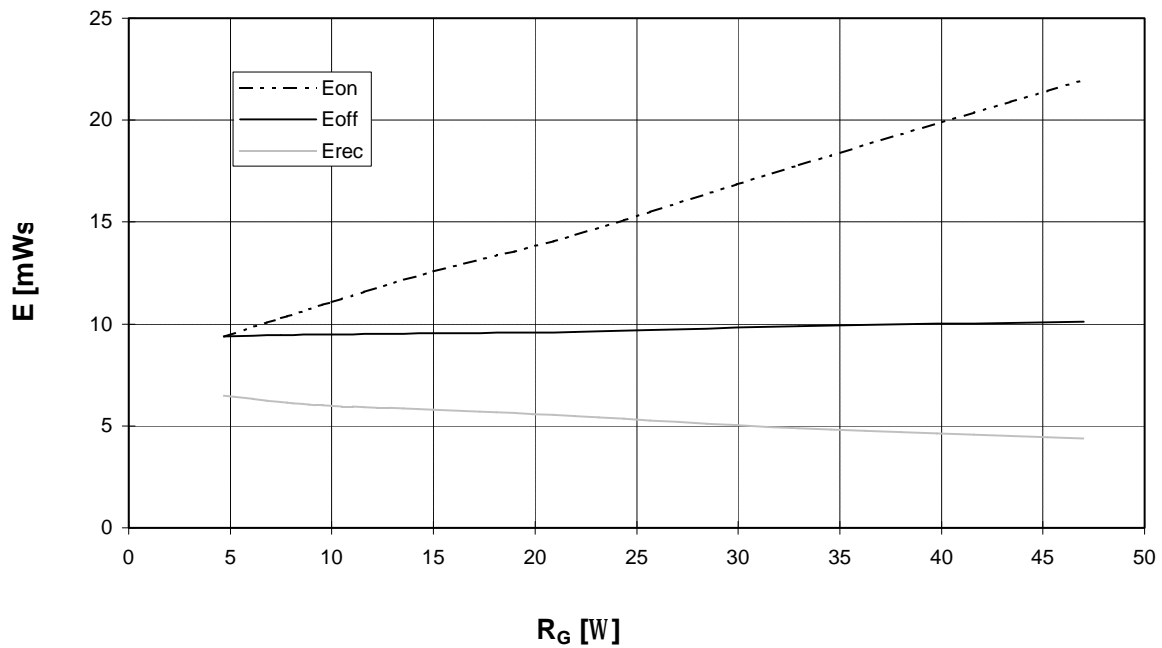


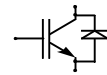
Vorläufige Daten
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Schaltverluste Wechselr. (typisch) $E_{on} = f(I_C), E_{off} = f(I_C), E_{rec} = f(I_C)$ $V_{CC} = 600\text{ V}$
 Switching losses Inverter (typical) $T_j = 125^\circ\text{C}, V_{GE} = \pm 15\text{ V}, R_{Gon} = R_{Goff} = 4,7\text{ Ohm}$



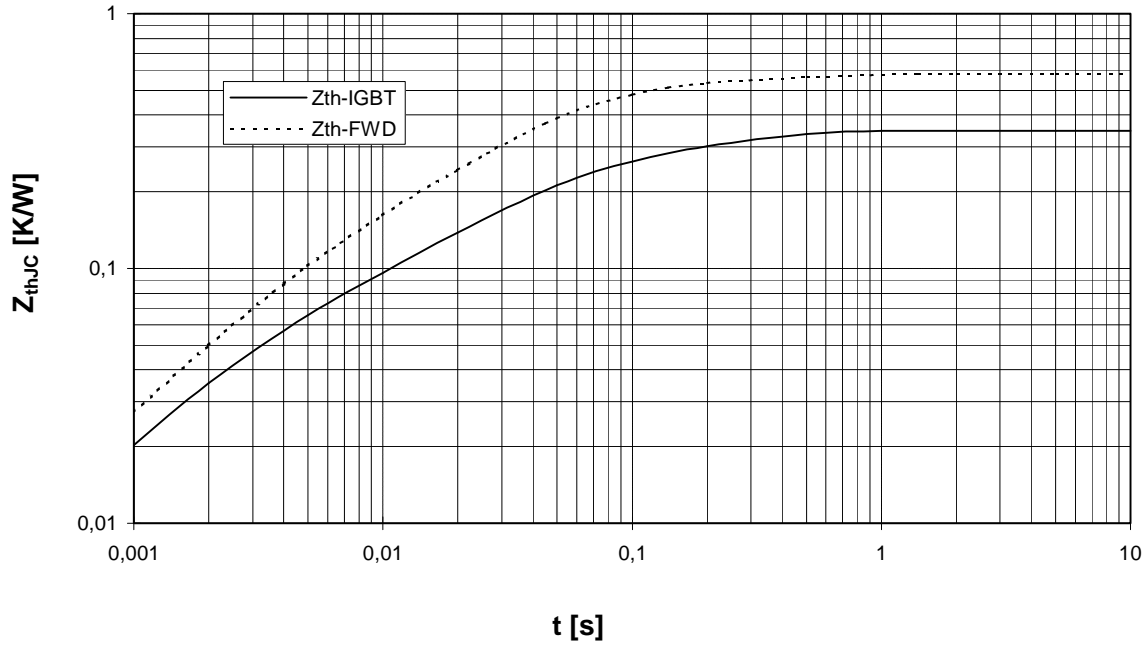
Schaltverluste Wechselr. (typisch) $E_{on} = f(R_G), E_{off} = f(R_G), E_{rec} = f(R_G)$ $V_{CC} = 600\text{ V}$
 Switching losses Inverter (typical) $T_j = 125^\circ\text{C}, V_{GE} = \pm 15\text{ V}, I_C = I_{nenn}, V_{CC} = 600\text{ V}$



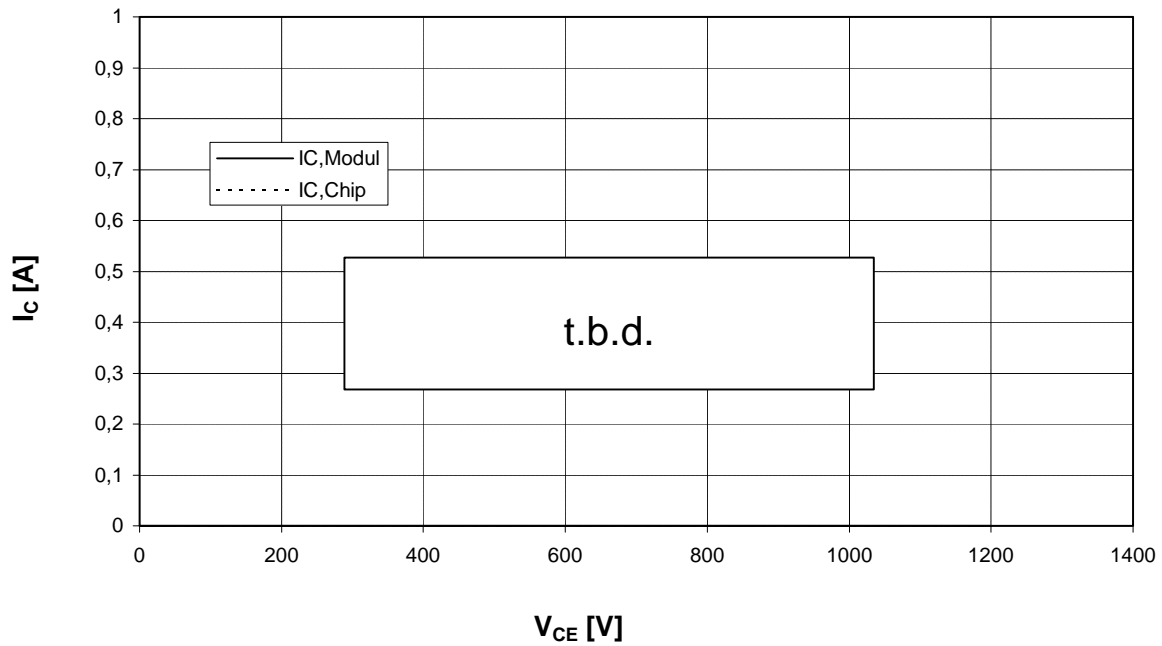


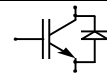
Vorläufige Daten
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Transienter Wärmewiderstand Wechslr. $Z_{thJC} = f(t)$
Transient thermal impedance Inverter



Sicherer Arbeitsbereich Wechslr. (RBSOA) $I_C = f(V_{CE})$
Reverse bias safe operating area Inverter (RBSOA) $T_{vi} = 125^\circ\text{C}, V_{GE} = \pm 15\text{V}, R_G = 4,7 \text{ Ohm}$

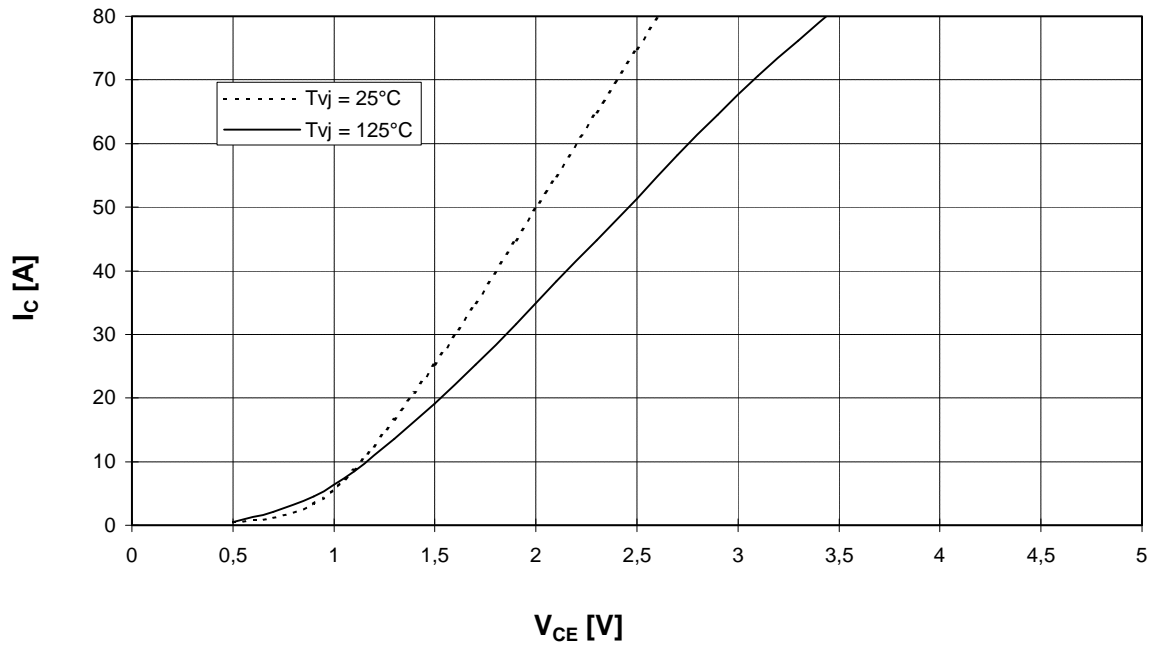




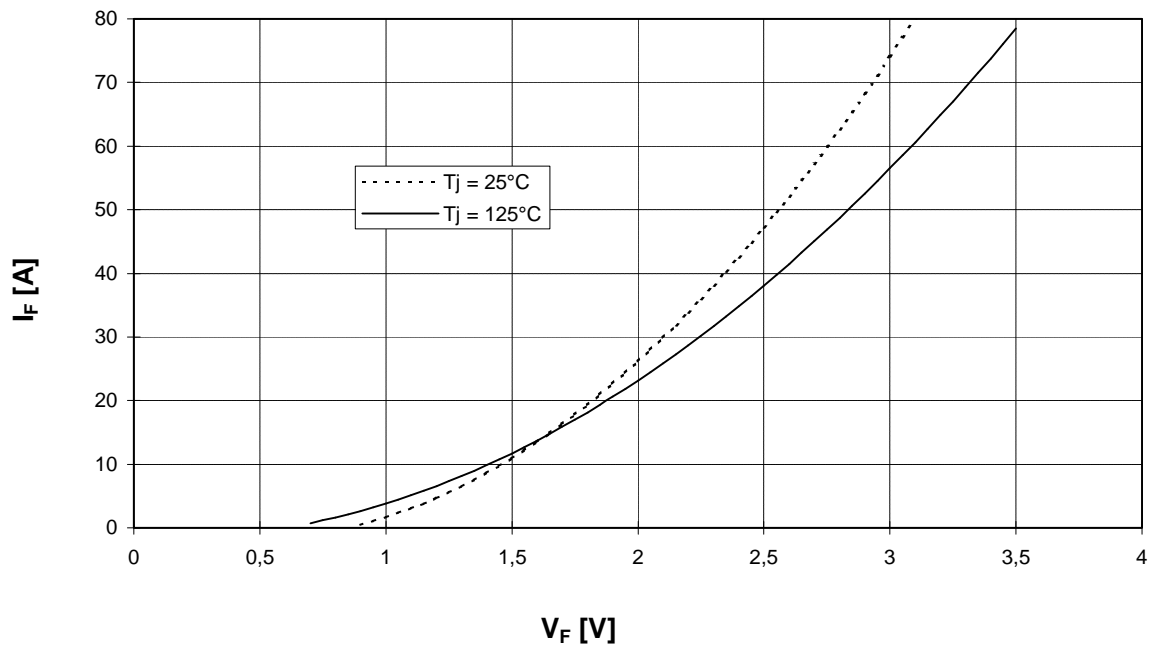
Vorläufige Daten
Preliminary data

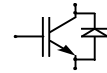
Ausgangskennlinienfeld Brems-Chopper-IGBT (typisch)
Output characteristic brake-chopper-IGBT (typical)

$I_C = f(V_{CE})$
 $V_{GE} = 15\text{ V}$



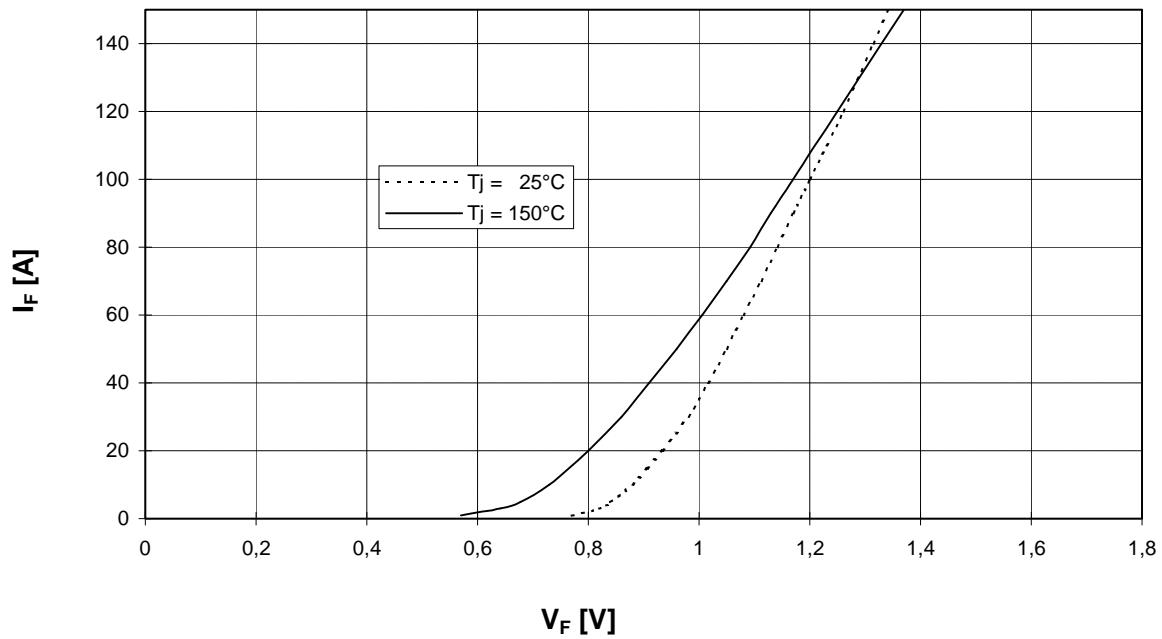
Durchlaßkennlinie der Brems-Chopper-Diode (typisch) $I_F = f(V_F)$
Forward characteristic of brake-chopper-FWD (typical)



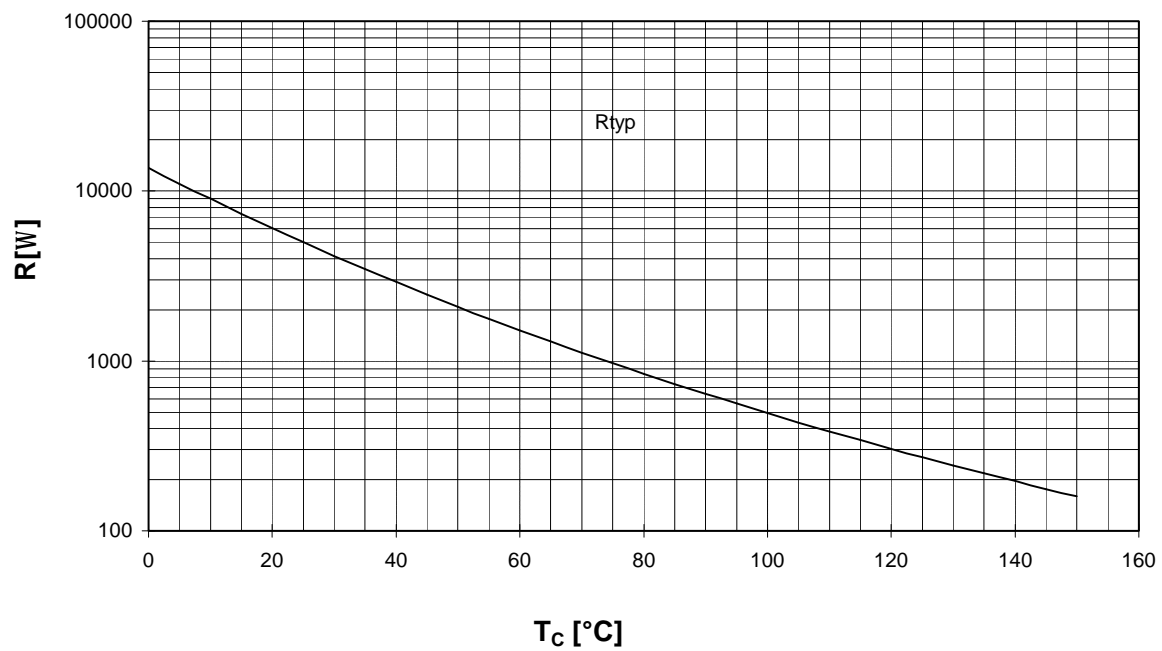


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Durchlaßkennlinie der Gleichrichterdiode (typisch) $I_F = f(V_F)$
Forward characteristic of Rectifier Diode (typical)



NTC- Temperaturkennlinie (typisch) $R = f(T)$
NTC- temperature characteristic (typical)



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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