

$V_{CES} = 1200V$
 $I_{C\ nom} = 75A / I_{CRM} = 150A$

典型应用

- 三电平应用
- 太阳能应用

电气特性

- 低电感设计
- 低开关损耗
- 低 V_{CEsat}

机械特性

- 低热阻的三氧化二铝 (Al_2O_3 衬底
- 紧凑型设计
- PressFIT 压接技术
- 集成的安装夹使安装坚固

Typical Applications

- 3-Level-Applications
- Solar Applications

Electrical Features

- Low Inductive Design
- Low Switching Losses
- Low V_{CEsat}

Mechanical Features

- Al_2O_3 Substrate with Low Thermal Resistance
- Compact design
- PressFIT Contact Technology
- Rugged mounting due to integrated mounting clamps

Module Label Code

Barcode Code 128



DMX - Code



Content of the Code

	Digit
Module Serial Number	1 - 5
Module Material Number	6 - 11
Production Order Number	12 - 19
Datecode (Production Year)	20 - 21
Datecode (Production Week)	22 - 23

prepared by: CM	date of publication: 2014-06-12	
approved by: AKDA	revision: 3.1	UL approved (E83335)

IGBT, T1-T4 / IGBT, T1-T4

最大额定值 / Maximum Rated Values

集电极 - 发射极电压 Collector-emitter voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{CES}	1200	V
集电极电流 Implemented collector current		I_{CN}	75	A
连续集电极直流电流 Continuous DC collector current	$T_C = 100^{\circ}\text{C}, T_{vj\max} = 175^{\circ}\text{C}$ $T_C = 25^{\circ}\text{C}, T_{vj\max} = 175^{\circ}\text{C}$	$I_{C\text{nom}}$ I_C	30 45	A A
集电极重复峰值电流 Repetitive peak collector current	$t_P = 1\text{ms}$	I_{CRM}	150	A
总功率损耗 Total power dissipation	$T_C = 25^{\circ}\text{C}, T_{vj\max} = 175^{\circ}\text{C}$	P_{tot}	275	W
栅极 - 发射极峰值电压 Gate-emitter peak voltage		V_{GES}	+/-20	V

特征值 / Characteristic Values

			min.	typ.	max.		
集电极 - 发射极饱和电压 Collector-emitter saturation voltage	$I_C = 30\text{A}, V_{GE} = 15\text{V}$ $I_C = 30\text{A}, V_{GE} = 15\text{V}$ $I_C = 30\text{A}, V_{GE} = 15\text{V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$V_{CE\text{sat}}$	1,45 1,55 1,60	1,70	V V V	
栅极阈值电压 Gate threshold voltage	$I_C = 2,60\text{mA}, V_{CE} = V_{GE}, T_{vj} = 25^{\circ}\text{C}$		$V_{G\text{Eth}}$	5,0	5,8	6,5	V
栅极电荷 Gate charge	$V_{GE} = -15\text{V} \dots +15\text{V}$		Q_G	0,57			μC
内部栅极电阻 Internal gate resistor	$T_{vj} = 25^{\circ}\text{C}$		$R_{G\text{int}}$	0,0			Ω
输入电容 Input capacitance	$f = 1\text{MHz}, T_{vj} = 25^{\circ}\text{C}, V_{CE} = 25\text{V}, V_{GE} = 0\text{V}$		C_{ies}	4,40			nF
反向传输电容 Reverse transfer capacitance	$f = 1\text{MHz}, T_{vj} = 25^{\circ}\text{C}, V_{CE} = 25\text{V}, V_{GE} = 0\text{V}$		C_{res}	0,235			nF
集电极-发射极截止电流 Collector-emitter cut-off current	$V_{CE} = 1200\text{V}, V_{GE} = 0\text{V}, T_{vj} = 25^{\circ}\text{C}$		I_{CES}			1,0	mA
栅极-发射极漏电流 Gate-emitter leakage current	$V_{CE} = 0\text{V}, V_{GE} = 20\text{V}, T_{vj} = 25^{\circ}\text{C}$		I_{GES}			100	nA
开通延迟时间(电感负载) Turn-on delay time, inductive load	$I_C = 30\text{A}, V_{CE} = 400\text{V}$ $V_{GE} = 15\text{V}$ $R_{Gon} = 6,8\Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$t_{d\text{on}}$	0,03 0,03 0,03			μs μs μs
上升时间(电感负载) Rise time, inductive load	$I_C = 30\text{A}, V_{CE} = 400\text{V}$ $V_{GE} = 15\text{V}$ $R_{Gon} = 6,8\Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	t_r	0,01 0,012 0,012			μs μs μs
关断延迟时间(电感负载) Turn-off delay time, inductive load	$I_C = 30\text{A}, V_{CE} = 400\text{V}$ $V_{GE} = 15\text{V}$ $R_{Goff} = 6,8\Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$t_{d\text{off}}$	0,25 0,32 0,34			μs μs μs
下降时间(电感负载) Fall time, inductive load	$I_C = 30\text{A}, V_{CE} = 400\text{V}$ $V_{GE} = 15\text{V}$ $R_{Goff} = 6,8\Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	t_f	0,025 0,04 0,045			μs μs μs
开通损耗能量(每脉冲) Turn-on energy loss per pulse	$I_C = 30\text{A}, V_{CE} = 400\text{V}, L_S = 40\text{nH}$ $V_{GE} = 15\text{V}, di/dt = 2600\text{A}/\mu\text{s} (T_{vj} = 150^{\circ}\text{C})$ $R_{Gon} = 6,8\Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	E_{on}	0,40 0,60 0,70			mJ mJ mJ
关断损耗能量(每脉冲) Turn-off energy loss per pulse	$I_C = 30\text{A}, V_{CE} = 400\text{V}, L_S = 40\text{nH}$ $V_{GE} = 15\text{V}, du/dt = 2400\text{V}/\mu\text{s} (T_{vj} = 150^{\circ}\text{C})$ $R_{Goff} = 6,8\Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	E_{off}	1,05 1,60 1,75			mJ mJ mJ
短路数据 SC data	$V_{GE} \leq 15\text{V}, V_{CC} = 800\text{V}$ $V_{CE\text{max}} = V_{CES} - L_{SCE} \cdot di/dt$ $t_P \leq 10\mu\text{s}, T_{vj} = 150^{\circ}\text{C}$		I_{SC}	270			A
结 - 外壳热阻 Thermal resistance, junction to case	每个 IGBT / per IGBT		R_{thJC}	0,50	0,55		K/W

prepared by: CM	date of publication: 2014-06-12
approved by: AKDA	revision: 3.1

外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个 IGBT / per IGBT $\lambda_{\text{Paste}} = 1 \text{ W/(m}\cdot\text{K)}$ / $\lambda_{\text{grease}} = 1 \text{ W/(m}\cdot\text{K)}$	R_{thCH}		0,45		K/W
在开关状态下温度 Temperature under switching conditions		$T_{\text{vj op}}$	-40		150	°C

二极管, D1 / D4 / Diode, D1 / D4

最大额定值 / Maximum Rated Values

反向重复峰值电压 Repetitive peak reverse voltage	$T_{\text{vj}} = 25^\circ\text{C}$	V_{RRM}		1200		V
连续正向直流电流 Continuous DC forward current		I_{F}		30		A
正向重复峰值电流 Repetitive peak forward current	$t_{\text{p}} = 1 \text{ ms}$	I_{FRM}		50		A
I^2t -值 I^2t - value	$V_{\text{R}} = 0 \text{ V}, t_{\text{p}} = 10 \text{ ms}, T_{\text{vj}} = 125^\circ\text{C}$ $V_{\text{R}} = 0 \text{ V}, t_{\text{p}} = 10 \text{ ms}, T_{\text{vj}} = 150^\circ\text{C}$	I^2t		90,0 75,0		A^2s A^2s

特征值 / Characteristic Values

				min.	typ.	max.	
正向电压 Forward voltage	$I_{\text{F}} = 30 \text{ A}, V_{\text{GE}} = 0 \text{ V}$ $I_{\text{F}} = 30 \text{ A}, V_{\text{GE}} = 0 \text{ V}$ $I_{\text{F}} = 30 \text{ A}, V_{\text{GE}} = 0 \text{ V}$	$T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$	V_{F}		1,85 1,90 1,90	2,40	V V V
反向恢复峰值电流 Peak reverse recovery current	$I_{\text{F}} = 30 \text{ A}, -di_{\text{F}}/dt = 2600 \text{ A}/\mu\text{s} (T_{\text{vj}}=150^\circ\text{C})$ $V_{\text{R}} = 400 \text{ V}$ $V_{\text{GE}} = -15 \text{ V}$	$T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$	I_{RM}		72,0 80,0 82,0		A A A
恢复电荷 Recovered charge	$I_{\text{F}} = 30 \text{ A}, -di_{\text{F}}/dt = 2600 \text{ A}/\mu\text{s} (T_{\text{vj}}=150^\circ\text{C})$ $V_{\text{R}} = 400 \text{ V}$ $V_{\text{GE}} = -15 \text{ V}$	$T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$	Q_{r}		2,35 2,85 3,70		μC μC μC
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_{\text{F}} = 30 \text{ A}, -di_{\text{F}}/dt = 2600 \text{ A}/\mu\text{s} (T_{\text{vj}}=150^\circ\text{C})$ $V_{\text{R}} = 400 \text{ V}$ $V_{\text{GE}} = -15 \text{ V}$	$T_{\text{vj}} = 25^\circ\text{C}$ $T_{\text{vj}} = 125^\circ\text{C}$ $T_{\text{vj}} = 150^\circ\text{C}$	E_{rec}		0,80 1,30 1,35		mJ mJ mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode		R_{thJC}		0,95	1,05	K/W
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode $\lambda_{\text{Paste}} = 1 \text{ W/(m}\cdot\text{K)}$ / $\lambda_{\text{grease}} = 1 \text{ W/(m}\cdot\text{K)}$		R_{thCH}		0,85		K/W
在开关状态下温度 Temperature under switching conditions			$T_{\text{vj op}}$	-40		150	°C

prepared by: CM	date of publication: 2014-06-12
approved by: AKDA	revision: 3.1

IGBT, T2 / T3 / IGBT, T2 / T3

最大额定值 / Maximum Rated Values

集电极 - 发射极电压 Collector-emitter voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{CES}	650	V
连续集电极直流电流 Continuous DC collector current	$T_C = 80^{\circ}\text{C}, T_{vj\max} = 175^{\circ}\text{C}$ $T_C = 25^{\circ}\text{C}, T_{vj\max} = 175^{\circ}\text{C}$	$I_{C\text{nom}}$ I_C	30 45	A A
集电极重复峰值电流 Repetitive peak collector current	$t_P = 1\text{ ms}$	I_{CRM}	60	A
总功率损耗 Total power dissipation	$T_C = 25^{\circ}\text{C}, T_{vj\max} = 175^{\circ}\text{C}$	P_{tot}	150	W
栅极 - 发射极峰值电压 Gate-emitter peak voltage		V_{GES}	+/-20	V

特征值 / Characteristic Values

			min.	typ.	max.		
集电极 - 发射极饱和电压 Collector-emitter saturation voltage	$I_C = 30\text{ A}, V_{GE} = 15\text{ V}$ $I_C = 30\text{ A}, V_{GE} = 15\text{ V}$ $I_C = 30\text{ A}, V_{GE} = 15\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	$V_{CE\text{sat}}$	1,55 1,70 1,80	2,00	V V V	
栅极阈值电压 Gate threshold voltage	$I_C = 0,30\text{ mA}, V_{CE} = V_{GE}, T_{vj} = 25^{\circ}\text{C}$		V_{GEth}	4,9	5,8	6,5	V
栅极电荷 Gate charge	$V_{GE} = -15\text{ V} \dots +15\text{ V}$		Q_G	0,30			μC
内部栅极电阻 Internal gate resistor	$T_{vj} = 25^{\circ}\text{C}$		R_{Gint}	0,0			Ω
输入电容 Input capacitance	$f = 1\text{ MHz}, T_{vj} = 25^{\circ}\text{C}, V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}$		C_{ies}	1,65			nF
反向传输电容 Reverse transfer capacitance	$f = 1\text{ MHz}, T_{vj} = 25^{\circ}\text{C}, V_{CE} = 25\text{ V}, V_{GE} = 0\text{ V}$		C_{res}	0,051			nF
集电极-发射极截止电流 Collector-emitter cut-off current	$V_{CE} = 650\text{ V}, V_{GE} = 0\text{ V}, T_{vj} = 25^{\circ}\text{C}$		I_{CES}			1,0	mA
栅极-发射极漏电流 Gate-emitter leakage current	$V_{CE} = 0\text{ V}, V_{GE} = 20\text{ V}, T_{vj} = 25^{\circ}\text{C}$		I_{GES}			100	nA
开通延迟时间(电感负载) Turn-on delay time, inductive load	$I_C = 30\text{ A}, V_{CE} = 400\text{ V}$ $V_{GE} = 15\text{ V}$ $R_{Gon} = 10\ \Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	t_{don}	0,022 0,025 0,025			μs μs μs
上升时间(电感负载) Rise time, inductive load	$I_C = 30\text{ A}, V_{CE} = 400\text{ V}$ $V_{GE} = 15\text{ V}$ $R_{Gon} = 10\ \Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	t_r	0,01 0,012 0,012			μs μs μs
关断延迟时间(电感负载) Turn-off delay time, inductive load	$I_C = 30\text{ A}, V_{CE} = 400\text{ V}$ $V_{GE} = 15\text{ V}$ $R_{Goff} = 10\ \Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	t_{doff}	0,16 0,18 0,185			μs μs μs
下降时间(电感负载) Fall time, inductive load	$I_C = 30\text{ A}, V_{CE} = 400\text{ V}$ $V_{GE} = 15\text{ V}$ $R_{Goff} = 10\ \Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	t_f	0,025 0,037 0,04			μs μs μs
开通损耗能量(每脉冲) Turn-on energy loss per pulse	$I_C = 30\text{ A}, V_{CE} = 400\text{ V}, L_S = 40\text{ nH}$ $V_{GE} = 15\text{ V}, di/dt = 2600\text{ A}/\mu\text{s} (T_{vj} = 150^{\circ}\text{C})$ $R_{Gon} = 10\ \Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	E_{on}	0,34 0,50 0,53			mJ mJ mJ
关断损耗能量(每脉冲) Turn-off energy loss per pulse	$I_C = 30\text{ A}, V_{CE} = 400\text{ V}, L_S = 40\text{ nH}$ $V_{GE} = 15\text{ V}, du/dt = 4700\text{ V}/\mu\text{s} (T_{vj} = 150^{\circ}\text{C})$ $R_{Goff} = 10\ \Omega$	$T_{vj} = 25^{\circ}\text{C}$ $T_{vj} = 125^{\circ}\text{C}$ $T_{vj} = 150^{\circ}\text{C}$	E_{off}	0,85 1,15 1,20			mJ mJ mJ
短路数据 SC data	$V_{GE} \leq 15\text{ V}, V_{CC} = 360\text{ V}$ $V_{CE\text{max}} = V_{CES} - L_{SCE} \cdot di/dt$	$t_P \leq 8\ \mu\text{s}, T_{vj} = 25^{\circ}\text{C}$ $t_P \leq 6\ \mu\text{s}, T_{vj} = 150^{\circ}\text{C}$	I_{SC}	210 150			A A
结 - 外壳热阻 Thermal resistance, junction to case	每个 IGBT / per IGBT		R_{thJC}	0,90	1,00		K/W
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个 IGBT / per IGBT $\lambda_{\text{Paste}} = 1\text{ W}/(\text{m}\cdot\text{K}) / \lambda_{\text{grease}} = 1\text{ W}/(\text{m}\cdot\text{K})$		R_{thCH}	0,85			K/W
在开关状态下温度 Temperature under switching conditions			$T_{vj\text{op}}$	-40	150		$^{\circ}\text{C}$

prepared by: CM

date of publication: 2014-06-12

approved by: AKDA

revision: 3.1



二极管, D2 / D3 / Diode, D2 / D3

最大额定值 / Maximum Rated Values

反向重复峰值电压 Repetitive peak reverse voltage	$T_{vj} = 25^{\circ}\text{C}$	V_{RRM}	650	V
连续正向直流电流 Continuous DC forward current		I_F	30	A
正向重复峰值电流 Repetitive peak forward current	$t_P = 1\text{ ms}$	I_{FRM}	60	A
I2t-值 I ² t - value	$V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 125^{\circ}\text{C}$ $V_R = 0\text{ V}, t_P = 10\text{ ms}, T_{vj} = 150^{\circ}\text{C}$	I^2t	130	A ² s
			115	A ² s

特征值 / Characteristic Values

			min.	typ.	max.	
正向电压 Forward voltage	$I_F = 30\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		1,45	1,65	V
	$I_F = 30\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 125^{\circ}\text{C}$		1,35		V
	$I_F = 30\text{ A}, V_{GE} = 0\text{ V}$	$T_{vj} = 150^{\circ}\text{C}$		1,30		V
反向恢复峰值电流 Peak reverse recovery current	$I_F = 30\text{ A}, -di_F/dt = 2600\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 400\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		42,0		A
		$T_{vj} = 125^{\circ}\text{C}$		48,0		A
		$T_{vj} = 150^{\circ}\text{C}$		50,0		A
恢复电荷 Recovered charge	$I_F = 30\text{ A}, -di_F/dt = 2600\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 400\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		1,80		μC
		$T_{vj} = 125^{\circ}\text{C}$		2,40		μC
		$T_{vj} = 150^{\circ}\text{C}$		2,60		μC
反向恢复损耗 (每脉冲) Reverse recovery energy	$I_F = 30\text{ A}, -di_F/dt = 2600\text{ A}/\mu\text{s} (T_{vj}=150^{\circ}\text{C})$ $V_R = 400\text{ V}$	$T_{vj} = 25^{\circ}\text{C}$		0,45		mJ
		$T_{vj} = 125^{\circ}\text{C}$		0,65		mJ
		$T_{vj} = 150^{\circ}\text{C}$		0,73		mJ
结 - 外壳热阻 Thermal resistance, junction to case	每个二极管 / per diode	R_{thJC}		1,00	1,20	K/W
外壳 - 散热器热阻 Thermal resistance, case to heatsink	每个二极管 / per diode $\lambda_{Paste} = 1\text{ W}/(\text{m}\cdot\text{K}) / \lambda_{grease} = 1\text{ W}/(\text{m}\cdot\text{K})$	R_{thCH}		0,70		K/W
在开关状态下温度 Temperature under switching conditions		$T_{vj\text{ op}}$	-40		150	$^{\circ}\text{C}$

负温度系数热敏电阻 / NTC-Thermistor

特征值 / Characteristic Values

			min.	typ.	max.	
额定电阻值 Rated resistance	$T_C = 25^{\circ}\text{C}$	R_{25}		5,00		k Ω
R100 偏差 Deviation of R100	$T_C = 100^{\circ}\text{C}, R_{100} = 493\ \Omega$	$\Delta R/R$	-5		5	%
耗散功率 Power dissipation	$T_C = 25^{\circ}\text{C}$	P_{25}			20,0	mW
B-值 B-value	$R_2 = R_{25} \exp [B_{25/50}(1/T_2 - 1/(298,15\text{ K}))]$	$B_{25/50}$		3375		K
B-值 B-value	$R_2 = R_{25} \exp [B_{25/80}(1/T_2 - 1/(298,15\text{ K}))]$	$B_{25/80}$		3411		K
B-值 B-value	$R_2 = R_{25} \exp [B_{25/100}(1/T_2 - 1/(298,15\text{ K}))]$	$B_{25/100}$		3433		K

根据应用手册标定

Specification according to the valid application note.

prepared by: CM	date of publication: 2014-06-12
approved by: AKDA	revision: 3.1

模块 / Module

绝缘测试电压 Isolation test voltage	RMS, f = 50 Hz, t = 1 min.	V _{ISOL}	2,5		kV
内部绝缘 Internal isolation	基本绝缘 (class 1, IEC 61140) basic insulation (class 1, IEC 61140)		Al ₂ O ₃		
爬电距离 Creepage distance	端子至散热器 / terminal to heatsink 端子至端子 / terminal to terminal		11,5 6,3		mm
电气间隙 Clearance	端子至散热器 / terminal to heatsink 端子至端子 / terminal to terminal		10,0 5,0		mm
相对电痕指数 Comperative tracking index		CTI	> 200		
			min.	typ.	max.
杂散电感,模块 Stray inductance module		L _{sCE}		30	nH
模块引线电阻,端子-芯片 Module lead resistance, terminals - chip	T _c = 25°C, 每个开关 / per switch	R _{CC'+EE'} R _{AA'+CC'}		5,00 6,00	mΩ
储存温度 Storage temperature		T _{stg}	-40		125 °C
Anpresskraft für mech. Bef. pro Feder mounting force per clamp		F	40	-	80 N
重量 Weight		G		24	g

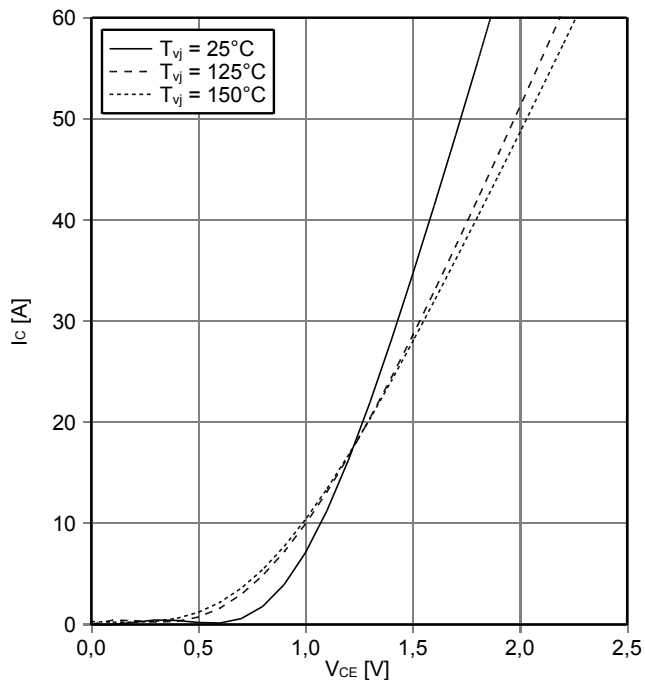
Der Strom im Dauerbetrieb ist auf 25A effektiv pro Anschlusspin begrenzt.
The current under continuous operation is limited to 25A rms per connector pin.

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approved by: AKDA	revision: 3.1



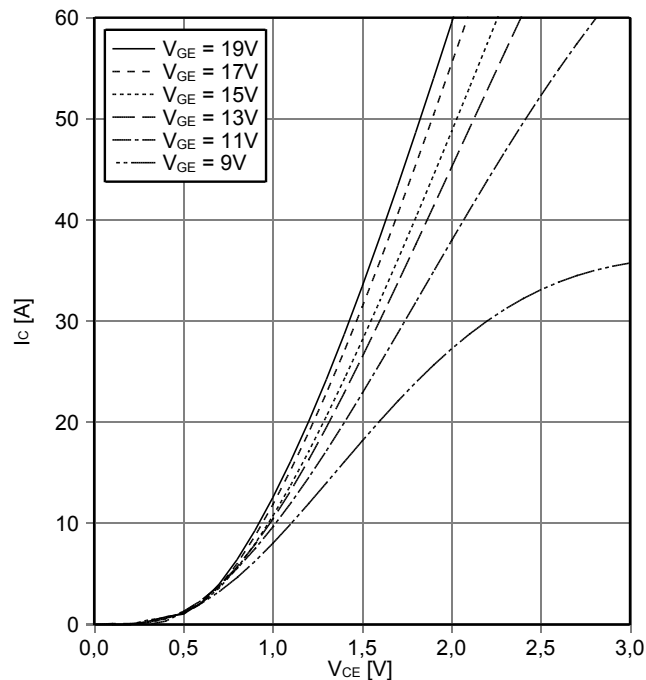
输出特性 IGBT, T1-T4 (典型)
output characteristic IGBT, T1-T4 (typical)

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



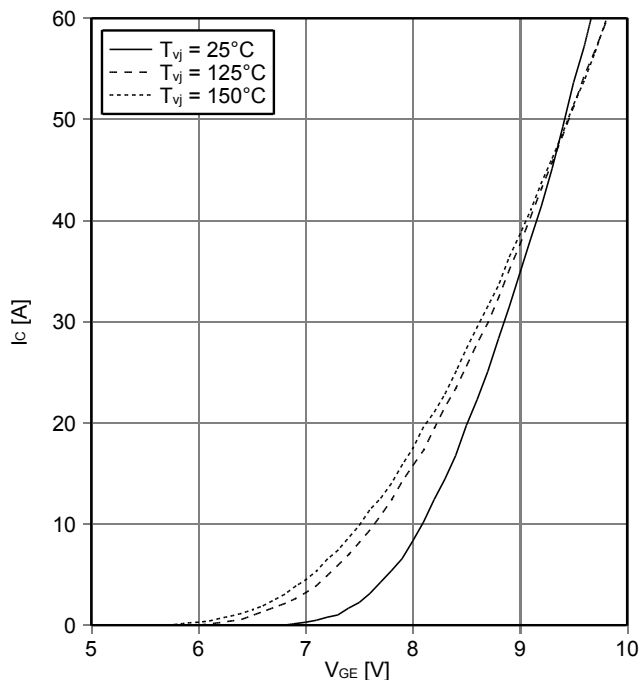
输出特性 IGBT, T1-T4 (典型)
output characteristic IGBT, T1-T4 (typical)

$I_C = f(V_{CE})$
 $T_{vj} = 150^\circ\text{C}$



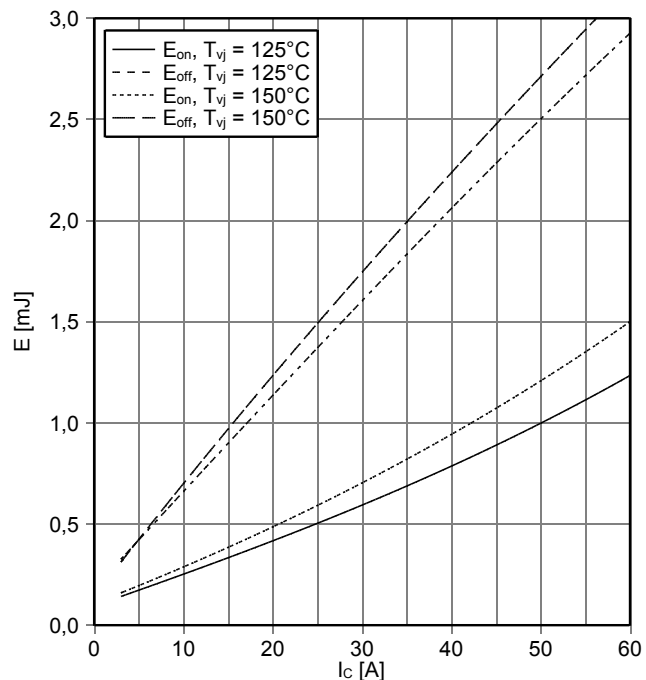
传输特性 IGBT, T1-T4 (典型)
transfer characteristic IGBT, T1-T4 (typical)

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



开关损耗 IGBT, T1-T4 (典型)
switching losses IGBT, T1-T4 (typical)

$E_{on} = f(I_C), E_{off} = f(I_C)$
 $V_{GE} = \pm 15\text{ V}, R_{Gon} = 6.8\ \Omega, R_{Goff} = 6.8\ \Omega, V_{CE} = 400\text{ V}$

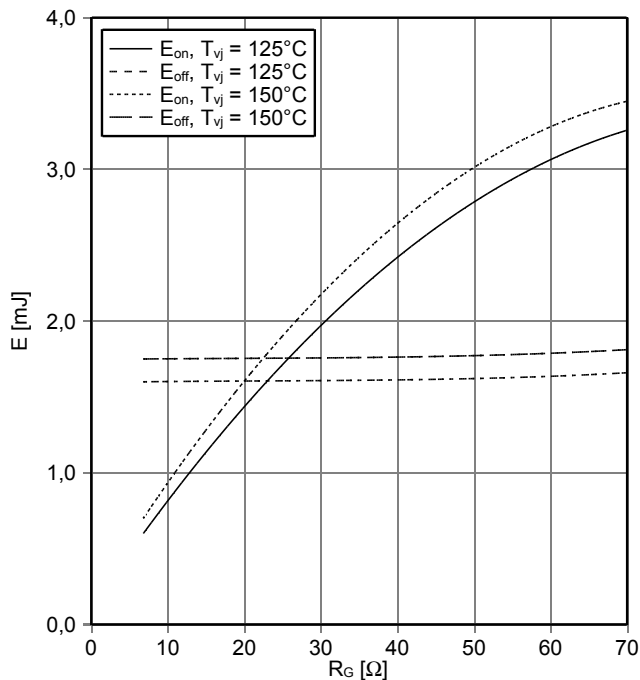


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approved by: AKDA	revision: 3.1



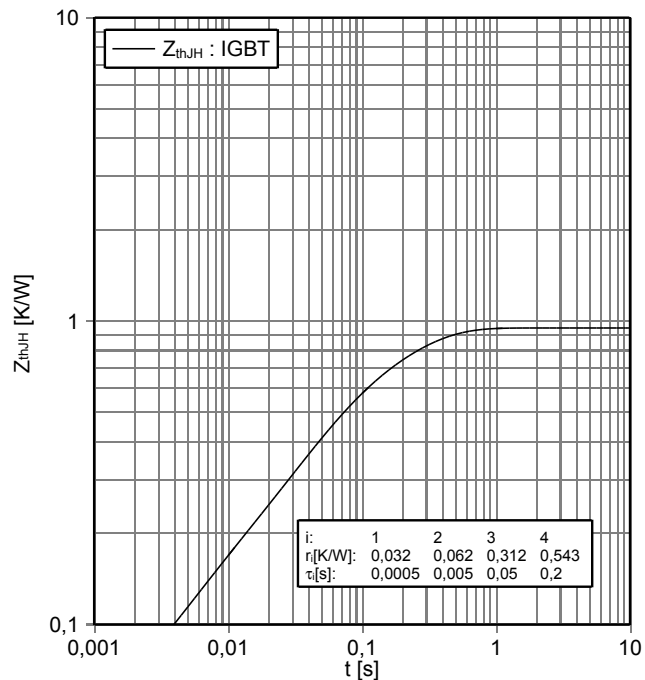
开关损耗 IGBT, T1-T4 (典型)
switching losses IGBT, T1-T4 (typical)

$E_{on} = f(R_G)$, $E_{off} = f(R_G)$
 $V_{GE} = \pm 15\text{ V}$, $I_C = 30\text{ A}$, $V_{CE} = 400\text{ V}$



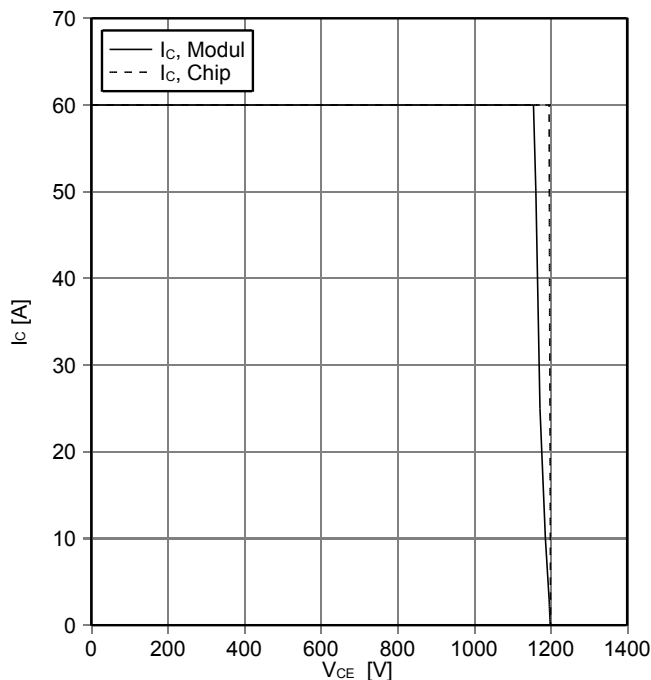
瞬态热阻抗 IGBT, T1-T4
transient thermal impedance IGBT, T1-T4

$Z_{thJH} = f(t)$



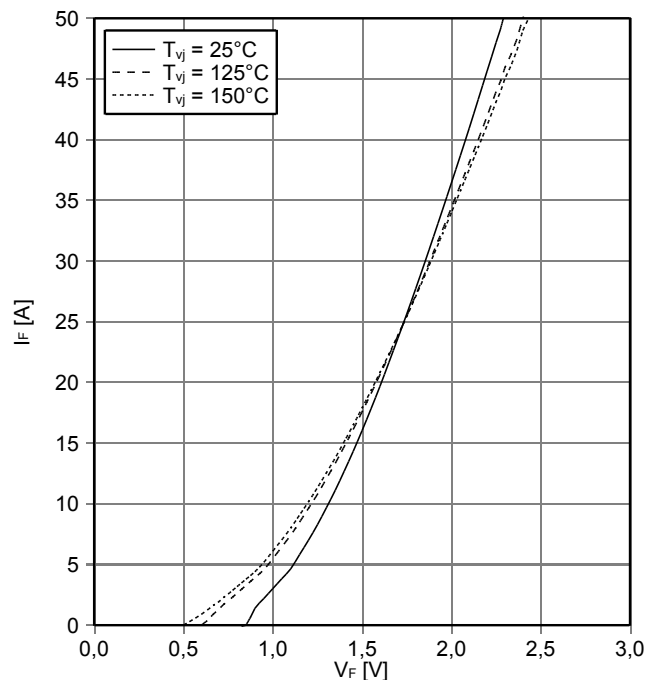
反偏安全工作区 IGBT, T1-T4 (RBSOA)
reverse bias safe operating area IGBT, T1-T4 (RBSOA)

$I_C = f(V_{CE})$
 $V_{GE} = \pm 15\text{ V}$, $R_{Goff} = 6.8\ \Omega$, $T_{vj} = 150^\circ\text{C}$



正向偏压特性 二极管, D1 / D4 (典型)
forward characteristic of Diode, D1 / D4 (typical)

$I_F = f(V_F)$

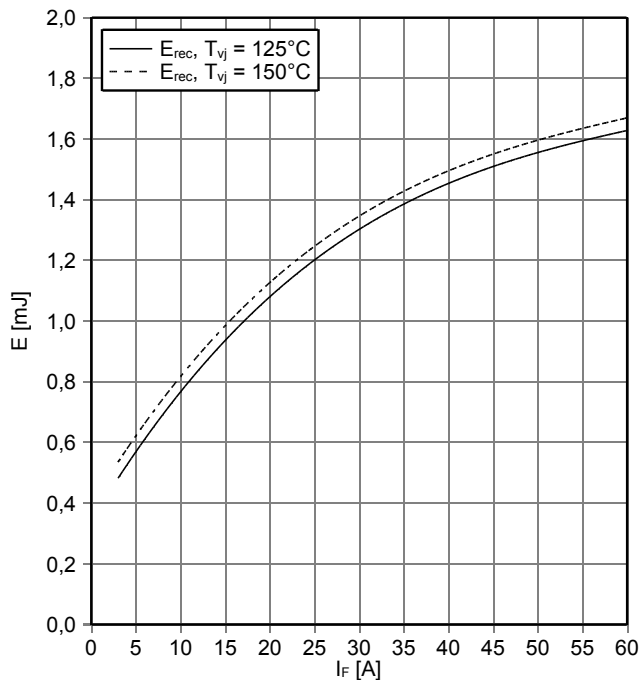


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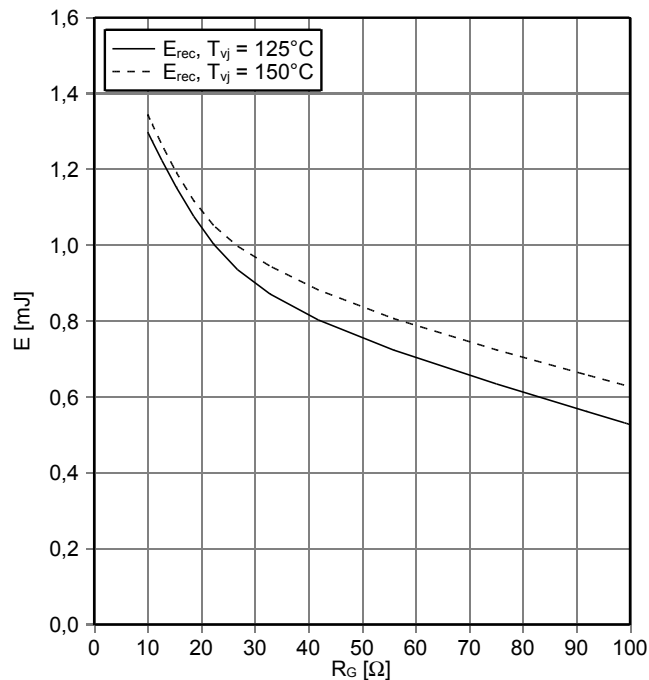
开关损耗 二极管, D1 / D4 (典型)
switching losses Diode, D1 / D4 (typical)

$E_{rec} = f(I_F)$
 $R_{Gon} = 10 \Omega, V_{CE} = 400 V$



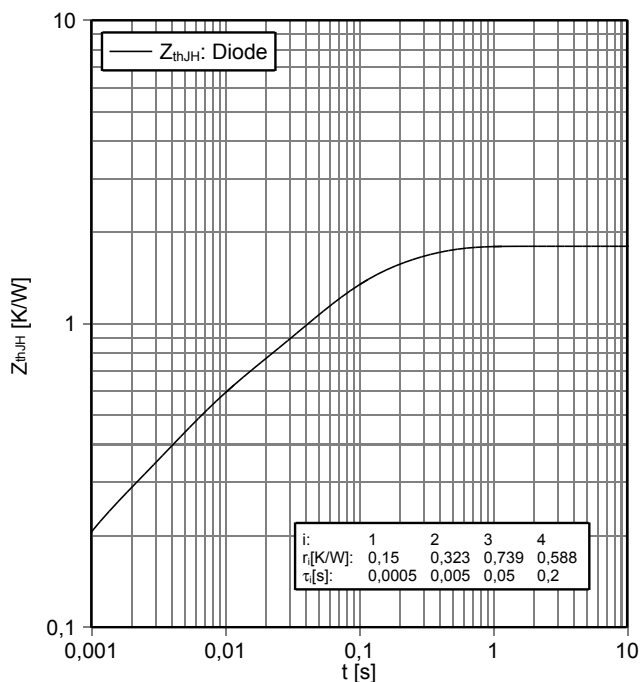
开关损耗 二极管, D1 / D4 (典型)
switching losses Diode, D1 / D4 (typical)

$E_{rec} = f(R_G)$
 $I_F = 30 A, V_{CE} = 400 V$



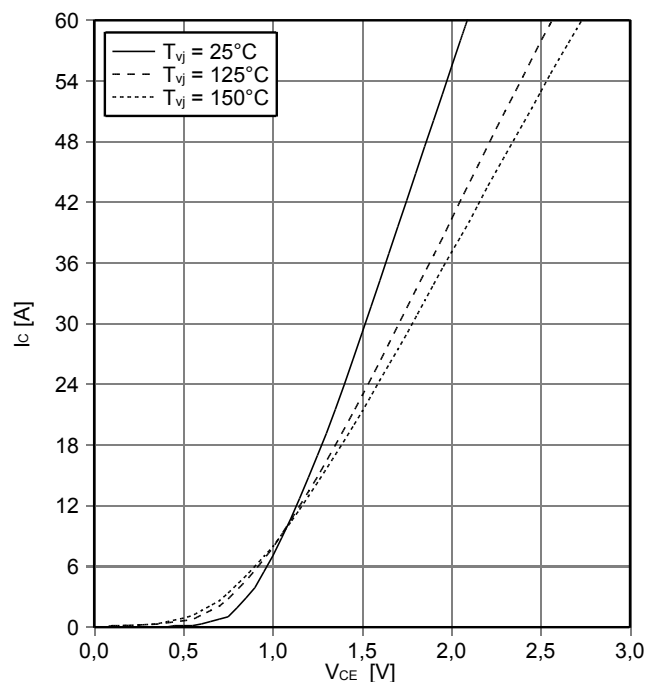
瞬态热阻抗 二极管, D1 / D4
transient thermal impedance Diode, D1 / D4

$Z_{thJH} = f(t)$



输出特性 IGBT, T2 / T3 (典型)
output characteristic IGBT, T2 / T3 (typical)

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

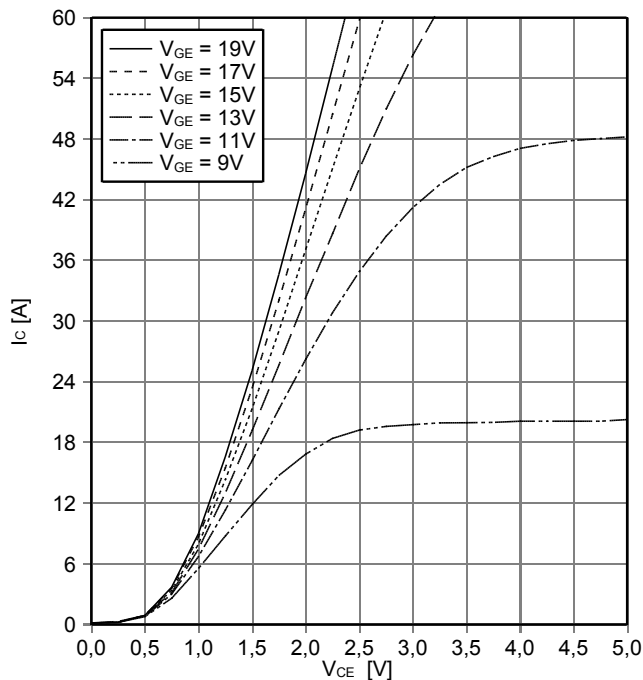


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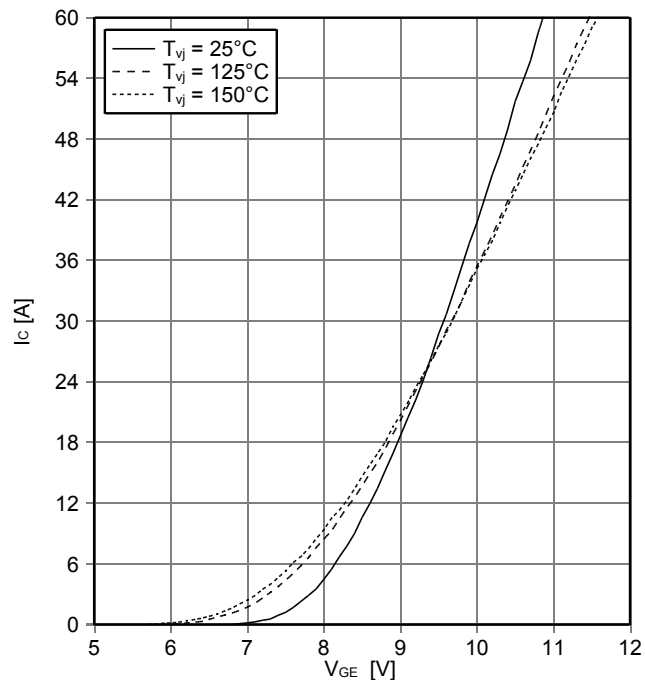
输出特性 IGBT, T2 / T3 (典型)
output characteristic IGBT, T2 / T3 (typical)

$I_C = f(V_{CE})$
 $T_{vj} = 150^\circ\text{C}$



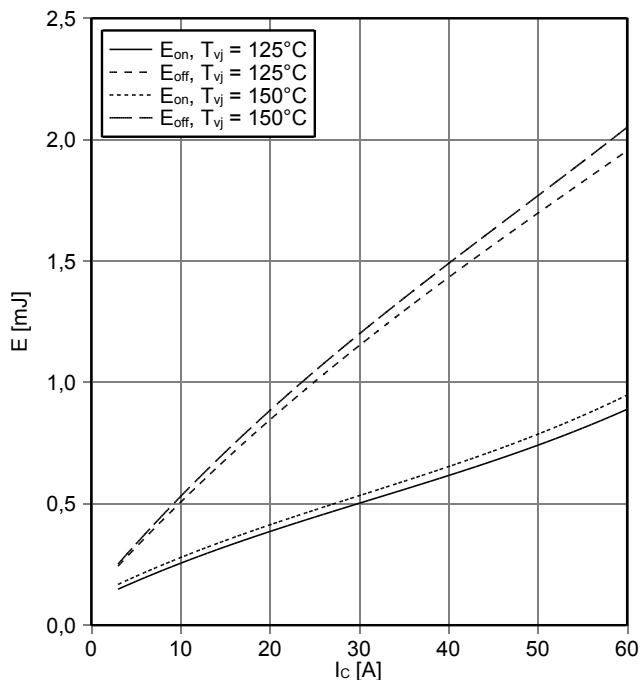
传输特性 IGBT, T2 / T3 (典型)
transfer characteristic IGBT, T2 / T3 (typical)

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



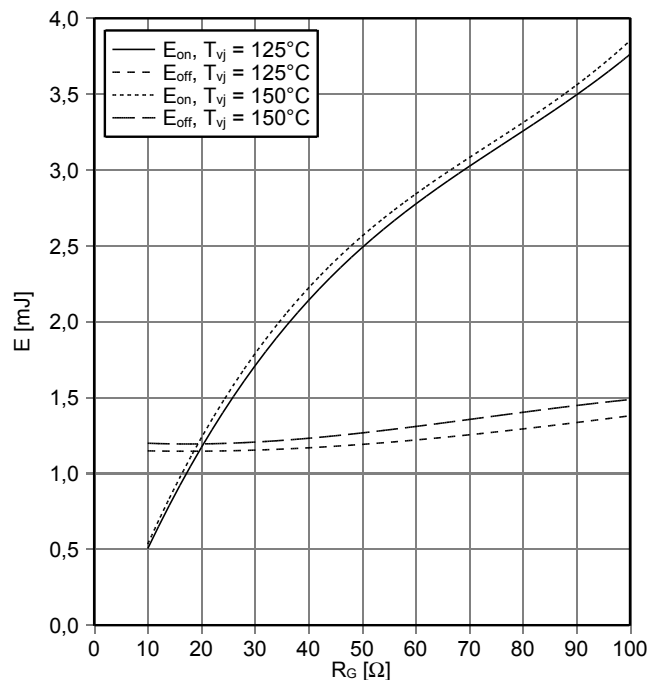
开关损耗 IGBT, T2 / T3 (典型)
switching losses IGBT, T2 / T3 (typical)

$E_{on} = f(I_C), E_{off} = f(I_C)$
 $V_{GE} = \pm 15\text{ V}, R_{Gon} = 10\ \Omega, R_{Goff} = 10\ \Omega, V_{CE} = 400\text{ V}$



开关损耗 IGBT, T2 / T3 (典型)
switching losses IGBT, T2 / T3 (typical)

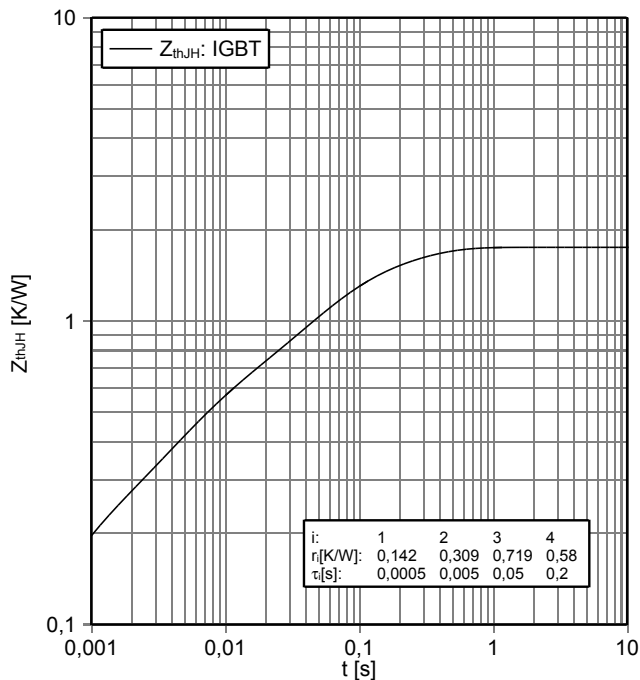
$E_{on} = f(R_G), E_{off} = f(R_G)$
 $V_{GE} = \pm 15\text{ V}, I_C = 30\text{ A}, V_{CE} = 400\text{ V}$



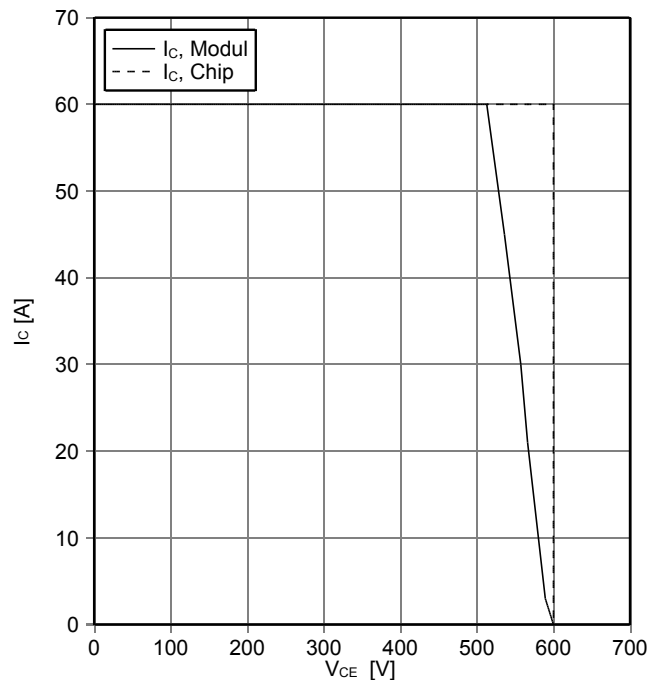
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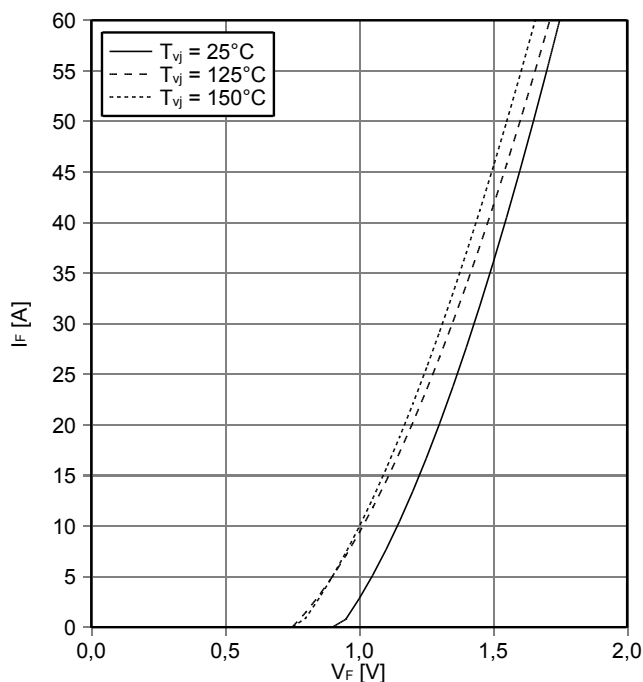
瞬态热阻抗 IGBT, T2 / T3
transient thermal impedance IGBT, T2 / T3
 $Z_{thJH} = f(t)$



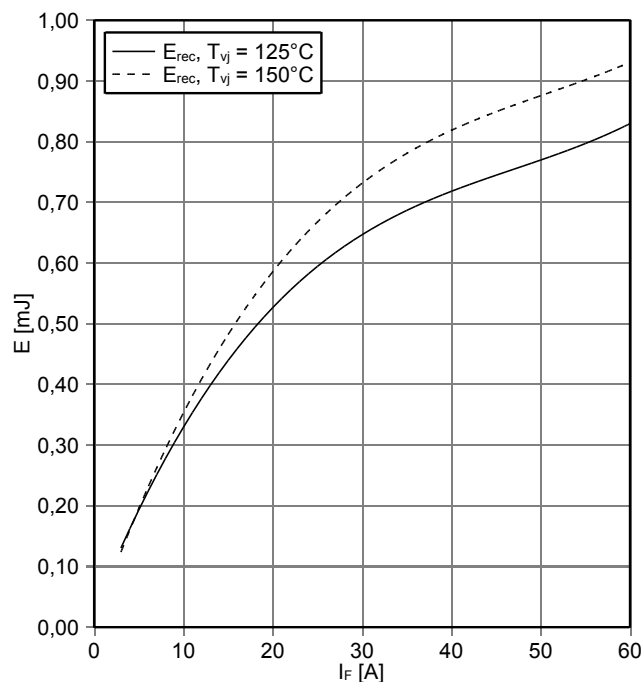
反偏安全工作区 IGBT, T2 / T3 (RBSOA)
reverse bias safe operating area IGBT, T2 / T3 (RBSOA)
 $I_C = f(V_{CE})$
 $V_{GE} = \pm 15 V, R_{Goff} = 10 \Omega, T_{vj} = 150^\circ C$



正向偏压特性 二极管, D2 / D3 (典型)
forward characteristic of Diode, D2 / D3 (typical)
 $I_F = f(V_F)$

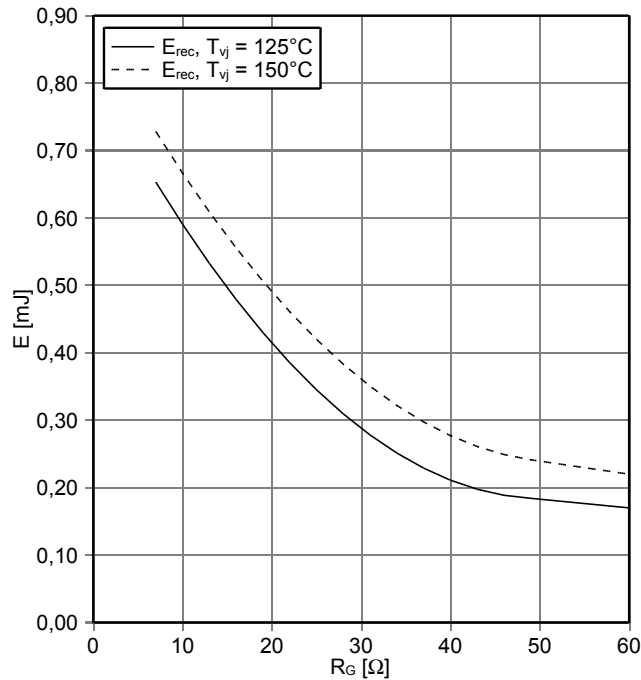


开关损耗 二极管, D2 / D3 (典型)
switching losses Diode, D2 / D3 (typical)
 $E_{rec} = f(I_F)$
 $R_{Gon} = 6.8 \Omega, V_{CE} = 400 V$

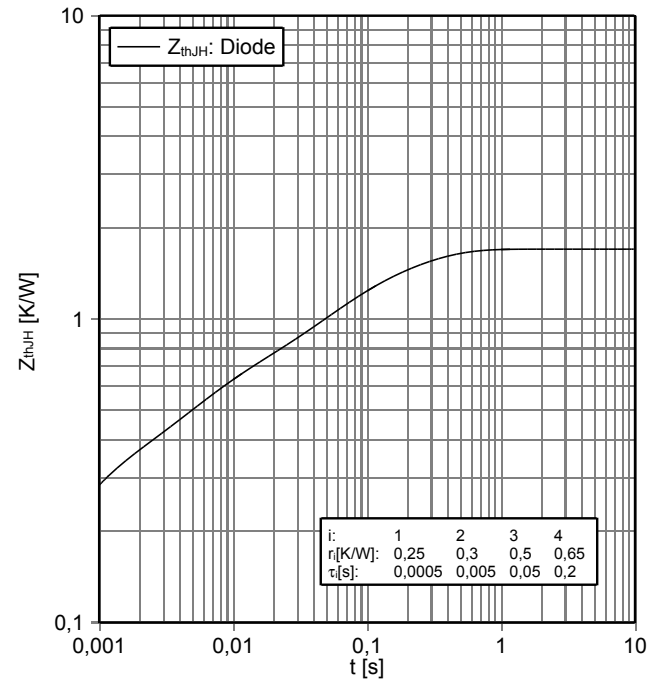


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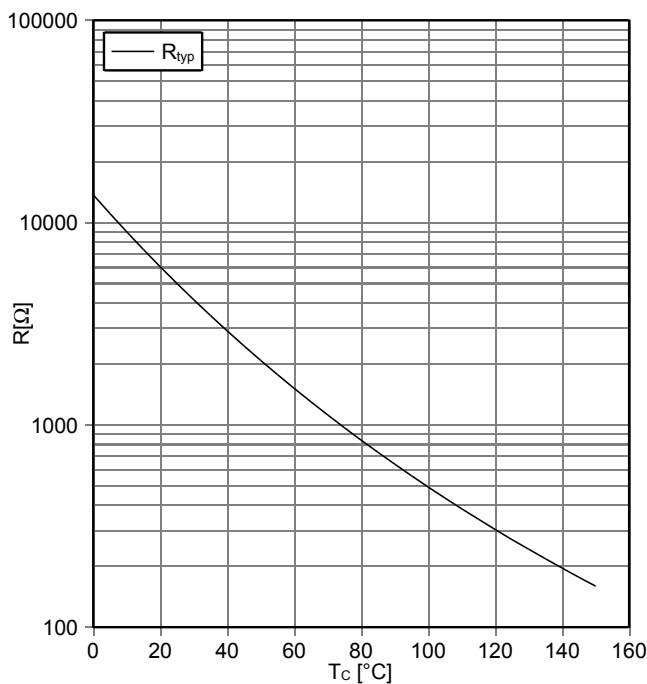
开关损耗 二极管, D2 / D3 (典型)
switching losses Diode, D2 / D3 (typical)
 $E_{rec} = f(R_G)$
 $I_F = 30\text{ A}, V_{CE} = 400\text{ V}$



瞬态热阻抗 二极管, D2 / D3
transient thermal impedance Diode, D2 / D3
 $Z_{thJH} = f(t)$

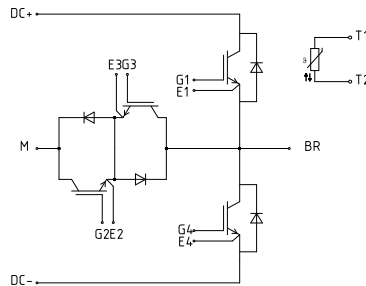


负温度系数热敏电阻 温度特性
NTC-Thermistor-temperature characteristic (typical)
 $R = f(T)$

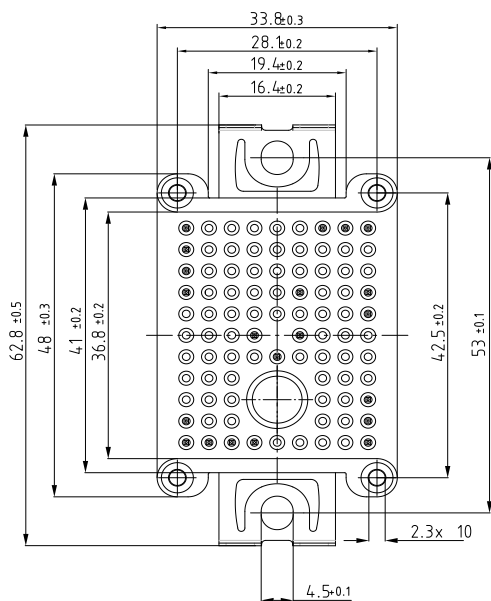
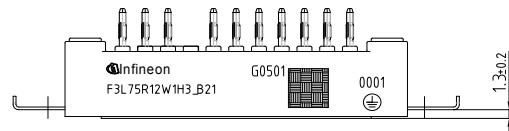
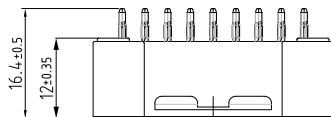


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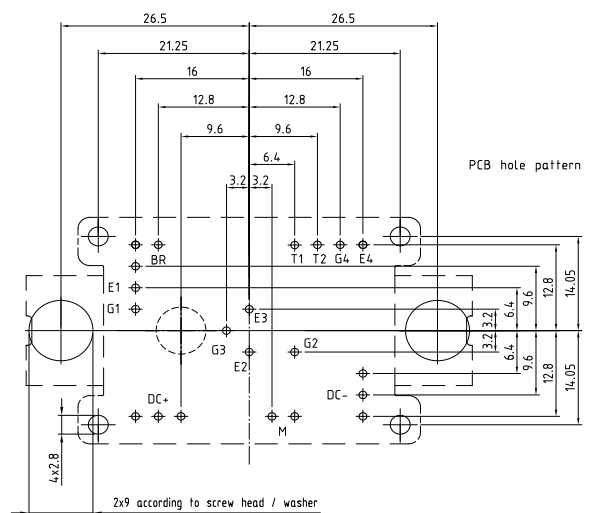
接线图 / circuit_diagram_headline



封装尺寸 / package outlines



- Pin-Grid 3.2mm
- Tolerance of PCB hole pattern $\oplus \phi 0.1$
- Hole specification for contacts see AN 2009-01
- Diameters of drill $\phi 1.15\text{mm}$
and copper thickness in hole 25-50 μm



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使用条件和条款

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