Features

- High Power Density
- High mechanical robustness
- Compact design
- Isolated heatsink using DBC technology
- Very low forward voltage drop
- Fast & soft reverse recovery anti-parallel FWD

Product Summary

Applications

- Active Rectifier
- Air Conditioning
- Motor Drives

IGBT, Inverter Absolute Maximum Ratings (@ T_C = 25°C unless otherwise specified)

Parameter	Conditions	Symbol	Values	Unit
Collector-emitter voltage	T_{vj} = 25°C	V_{CES}	1200	V
Continuous collector current	T_C = 25°C, T_{vj} = 175°C	I_C	28	A

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IGBT, Inverter Electrical Characteristics (@ T_C = 25°C unless otherwise specified)

Parameter	Conditions		Symbol	Values			Unit
				Min.	Typ.	Max.	
Collector-emitter saturation voltage	I_C = 15A, V_{GE} = 15V	T_{vj} = 25°C	$V_{CE(sat)}$		1.85	2.25	V
		T_{vj} = 125°C			2.30		
		T_{vj} = 150°C			2.35		
Gate threshold voltage	V_{CE}=V_{GE}, I_C=0.3mA		$V_{GE(th)}$	5.2	5.8	6.4	V
Gate-emitter leakage current	V_{CE} = 0V, V_{GE} = 20V		I_{GES}			400	nA
Collector leakage current	V_{CE}=1200V V_{GE}=0V		I_{CES}			1	mA
Input capacitance	f = 1MHz, T_{vj} = 25°C, V_{CE} = 25 V, V_{GE} = 0 V		C_{ies}		0.89		nF
Output capacitance			C_{oes}		0.03		nF
Gate charge	V_{GE} = -15V…+15V		Q_G		0.12		uC
Turn-on delay time, inductive load	V_{CE} = 600V, I_C = 15A , R_G = 51 Ÿ V_{GE} = ±15V , T_{vj} = 25 (		$t_{d(on)}$		98.4		ns
Rise time, inductive load			t_r		98.2		ns
Turn-off delay time, inductive load			$t_{d(off)}$		114		ns
Fall time, inductive load			t_f		174		ns
Turn-on energy loss per pulse			E_{on}		1.81		mJ

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FRED, Inverter Absolute Maximum Ratings (@ T_C = 25°C unless otherwise specified)

Parameter	Conditions	Symbol	Values	Unit

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IGBT, Brake-Chopper Electrical Characteristics (@ T_C = 25°C unless otherwise specified)

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	
Collector-						

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FRED, Brake-Chopper Absolute Maximum Ratings (@ T_C = 25°C unless otherwise specified)

Parameter	Conditions	Symbol	Values	Unit

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NTC-Thermistor Characteristics (@ T_C = 25°C unless otherwise specified)

Parameter	Conditions	Symbol	Values			Unit
			Min.	Typ.	Max.	

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Fig 5. FRED Foward Characteristics, Inverter(typcial)

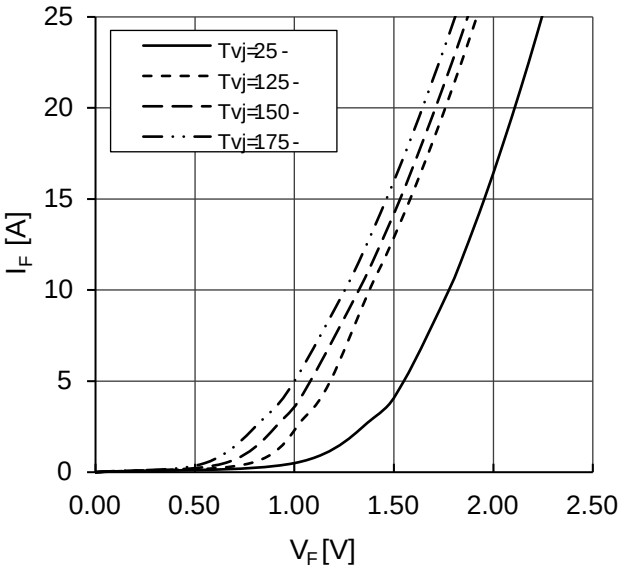


Fig 6. FRED Forward Characteristics, Inverter(typcial)

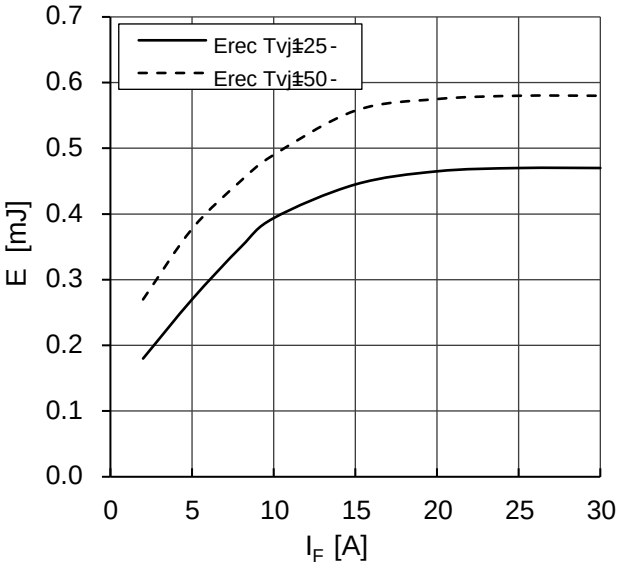
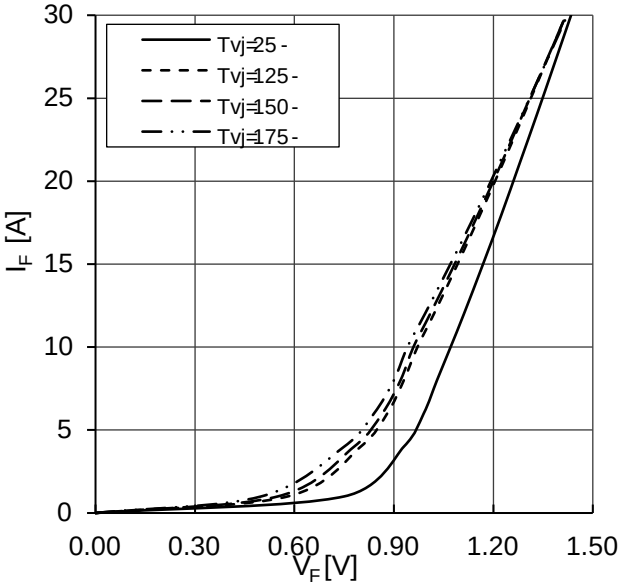


Fig 7. Diode Rectifier Forward Characteristics



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