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(@ T_C = 25℃ unless otherwise specified)

Repetitive peak reverse voltage	T_{vj} = 25℃	V_{RRM}	1600	V
Bridge output current	T_C = 80	I_D	50	A
Repetitive peak forward current	t_P = 10 ms, T_{vj} = 25℃	I_{FSM}	600	A
	t_P = 10 ms, T_{vj} = 150℃		470	
I^2t value for fusing	t_P = 10 ms, T_{vj} = 25℃	I^2t	1800	A^2s
	t_P = 10 ms, T_{vj} = 150℃		1100	

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Forward voltage	T_{vj} = 150℃, I_F=50A	V_F		1.0		V
Reverse current	T_{vj} = 25℃, V_R=1600V	I_R			0.1	mA
	T_{vj} = 150℃, V_R=1600V				2	mA
Thermal resistance, junction to case	per diode	$R_{th(j-c)}$			0.65	K/W
Temperature under switching conditions		$T_{vj\ op}$	-40		150	

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Collector-emitter voltage	T_{vj} = 25℃	V_{CES}	1200	V
Gate-emitter peak voltage		V_{GES}	±20	V
Continuous collector current	T_C = 100℃	I_C	40	A
Repetitive peak collector current	t_P = 1ms	I_{CRM}	80	A
Total power dissipation	T_C = 25℃, T_{vj} = 175℃	P_{tot}	166	W

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Rated resistance	T_C=25	R_{25}		5		KΩ
Deviation of R100	T_C = 100℃, R_{100} = 493 Ω	R/R	-5		5	%
Power dissipation	T_C = 25℃	P_{25}			20	mW
B-value	$R_2 = R_{25} \exp [B25/50(1/T2 - 1/(298,15 K))]$	$B_{25/50}$		3375		K

B-value R_2

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Fig 1. IGBT Output Characteristics
Inverter (typical) VGE=15 V

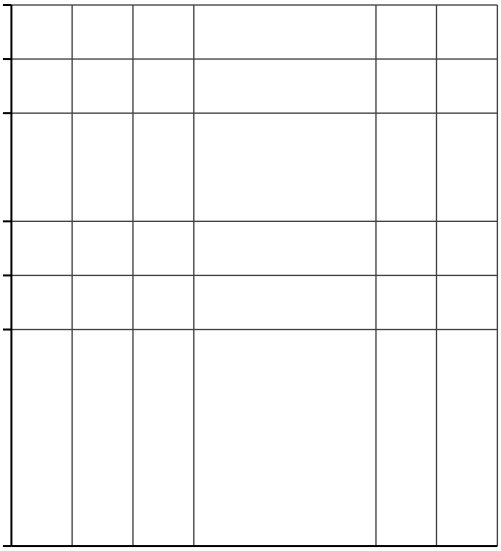


Fig 2. IGBT Output Characteristics
Inverter (typical)

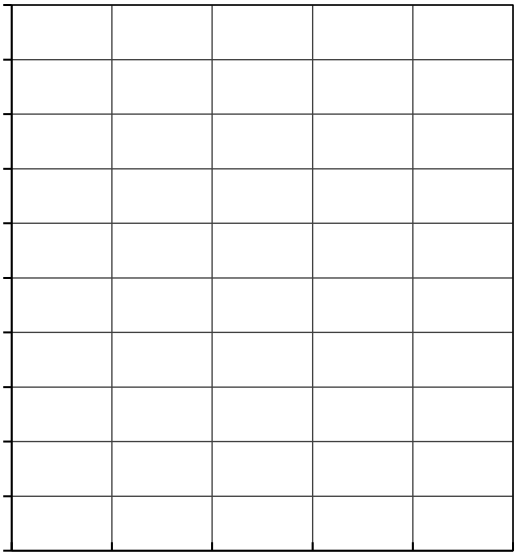


Fig 3. IGBT Transfer Characteristics
( ) VCE=20 V

Fig 4. IGBT Switching Loss vs Ic
Inverter (typical)
Rg=15 Ω, VCE=600 V, VGE=±15 V

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Fig 5. IGBT Switching Loss vs. Rg, Inverter (typical Ic=50 A, VCE=600 V, VGE=±15 V

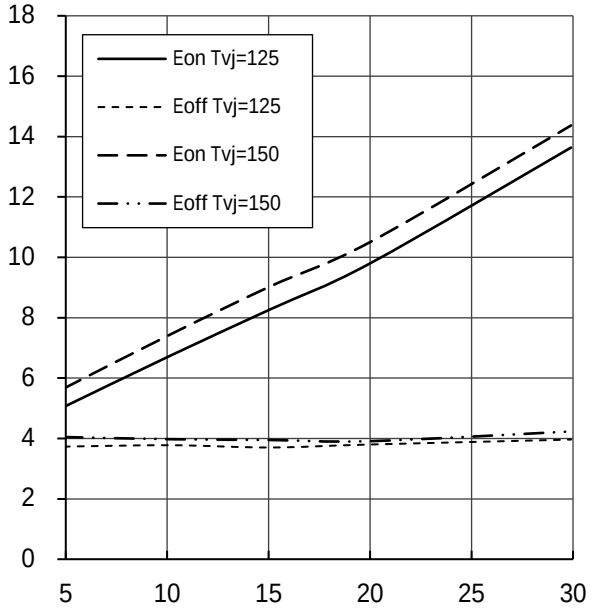


Fig 6. IGBT Transient Thermal Impedance Inverter

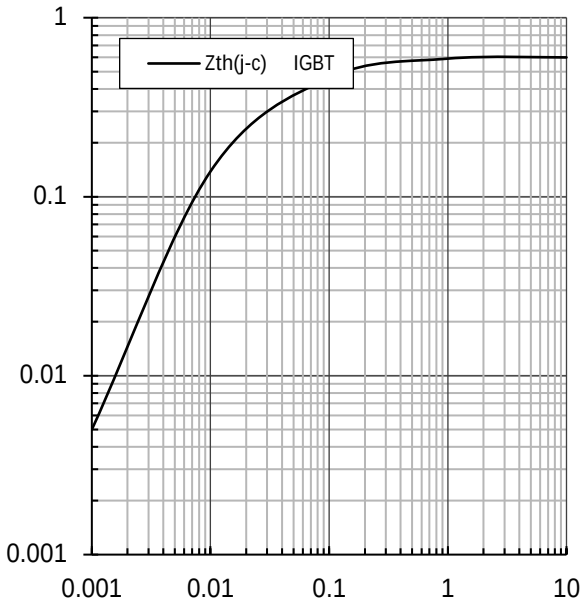


Fig 7. Reverse bias safe operating area IGBT, Inverter (RBSOA)

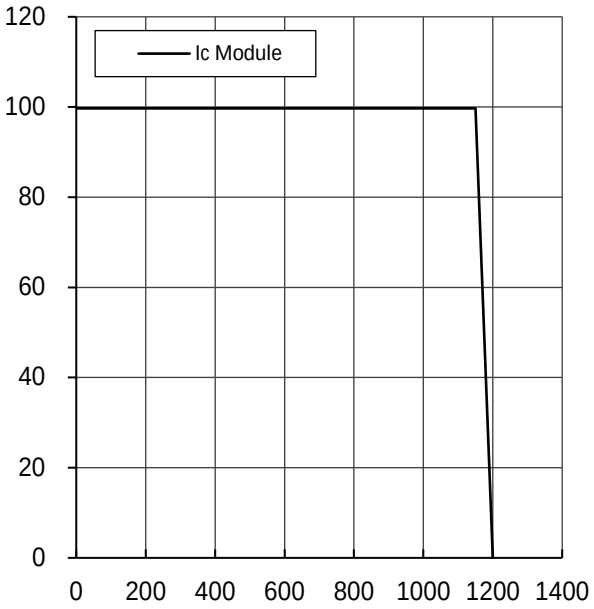
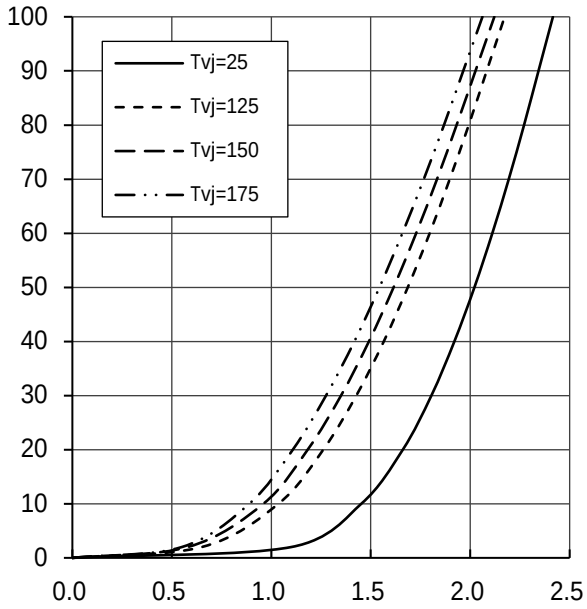


Fig 8. FRED Forward Characteristics, Inverter (typical)



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Fig 13. Diode Rectifier Transient Thermal Impedance

Fig 14. IGBT Output Characteristics
Brake-Chopper (typical) VGE=15 V

Fig 15. FRED Forward Characteristics,
Brake-Chopper (typical)

Fig 16. Temperature characteristics,
NTC thermistor (typical)

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