1DI200Z-100 (200A)

FUJI POWER TRANSISTOR MODULE

パワートランジスタモジュール
POWER TRANSISTOR MODULE

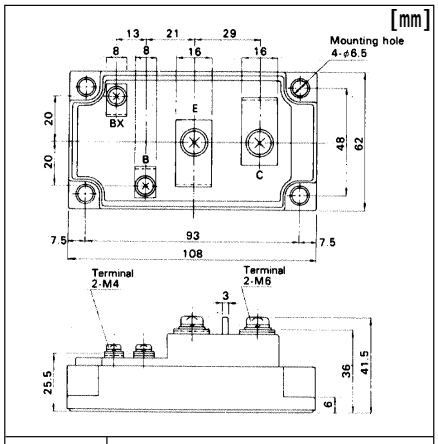
■ 特長：Features

- 高耐圧 High Voltagee
- ﾌﾘｰﾎｲﾘﾝｸﾞﾀﾞｲｵｰﾄﾞ内蔵 Including Free Wheeling Diode
- ASOが広い Excellent Safe Operating Area
- 絶縁形 Insulated Type

■ 用途：Applications

- ﾁｮｯﾊﾟ制御 Chopper Controls
- ACﾓｰﾀ制御 AC Motor Controls
- DCﾓｰﾀ制御 DC Motor Controls
- 無停電電源装置 Uninterruptible Power Supply

■ 外形寸法:Outline Drawings



CASE	M106
UL	E82988(M)

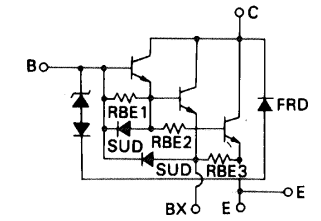
■ 定格と特性: Maximum ratings and characteristic

● 絶対最大定格
Absolute maximum ratings (Tc=25°C unless otherwise specified)

Item		Symbol	Rating	Unit
コレクタ・ベース間電圧		V_{CBO}	1000	V
コレクタ・エミッタ間電圧		V_{CEO}	1000	V
エミッタ・ベース間電圧		V_{EBO}	10	V
コレクタ電流	DC	I_C	200	A
	1ms	I_{CP}	400	A
	DC	$-I_C$	200	A
ベース電流	DC	I_B	12	A
	1ms	I_{BP}	24	A
コレクタ損失	one Transistor	P_C	1400	W
	two Transistor	P_C	-	W
接合部温度		T_j	+150	℃
保存温度		T_{stg}	-40 to +125	℃
質量		m	460	g
絶縁耐圧	AC.1min	Viso	2500	V
締付けトルク		Mounting *1	3.5	N･m
		Terminal *2	1.7	N･m
			4.5	N･m

■ 等価回路:
Equivalent Circuit Schematic

Fig.D2



Note:
*1:推奨値 Recommendable Value;
2.5to3.5N･m[25to35kgf･cm]
(M5)or(M6)
*1:推奨値 Recommendable Value;
1.4to1.6N･m[14to16kgf･cm](M4)
3.5to4.0N･m[35to40kgf･cm](M6)

● 電気的特性 : Electrical characteristics (T_c =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
コレクタ・ベース間電圧	V_{CBO}	I_{CBO} = 4mA	1000			V
コレクタ・エミッタ間電圧	V_{CEO}	I_C = 4mA	1000			V
コレクタ・エミッタ間電圧	$V_{CEO(SUS)}$	-	-			V
	$V_{CEX(SUS)}$	V_{BE} = -3V	1000			V
エミッタ・ベース間電圧	V_{EBO}	I_{EBO} = 800mA	10			V
コレクタしゃ断電流	I_{CBO}	V_{CBO} = 1000V			4.0	mA
エミッタしゃ断電流	I_{EBO}	V_{EBO} = 10V			800	mA
コレクタ・エミッタ電圧	$-V_{CE}$	I_C = -200A,			1.8	V
直流電流増幅率	h_{FE}	I_C = 200A, V_{CE} = 5V	100			-
		I_C = 200A, V_{CE} = 2.5V, Tj=125°C	75			-
コレクタ・エミッタ飽和電圧	$V_{CE(Sat)}$	I_C = 200A, I_B = 2.8A			2.8	V
ベース・エミッタ飽和電圧	$V_{BE(Sat)}$				3.5	V
スイッチング時間	t_{on}	I_C = 200A,			2.5	µs
	t_{stg}	I_{B1} = +2.8A, I_{B2} = -4.0A			12.0	µs
	t_f				2.0	µs
逆回復時間	trr	I_C=200A, V_{BE}=-6V, -di/dt=200A/µs			0.7	µs

● 熱的特性 : Thermal characteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
熱 抵 抗	$R_{th(j-c)}$	Transistor			0.089	°C/W
	$R_{th(j-c)}$	Recovery Diode			0.35	°C/W
	$R_{th(c-f)}$	With Thermal Compound		0.03		°C/W

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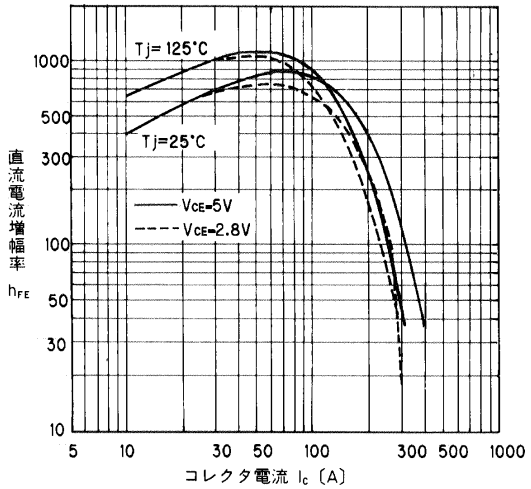
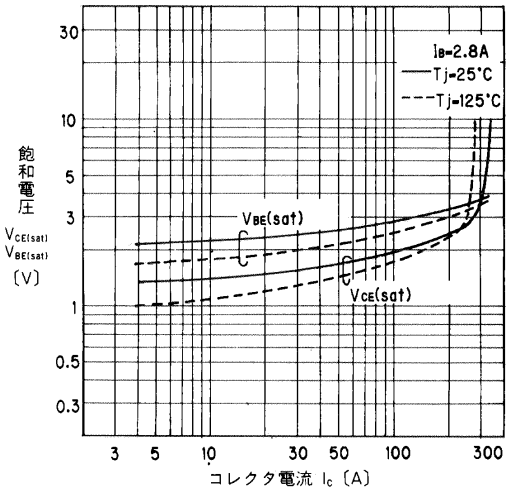
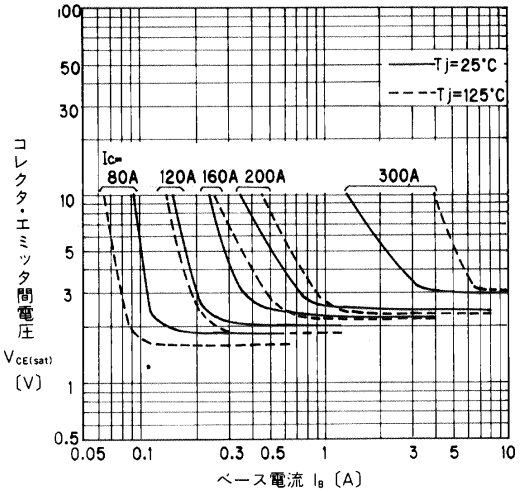
■ 特性曲線 ： Characteristics



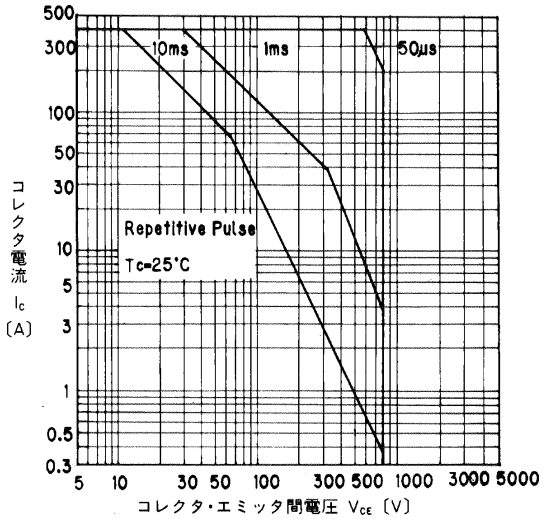
直流電流増幅率—コレクタ電流特性
DC Current Gain



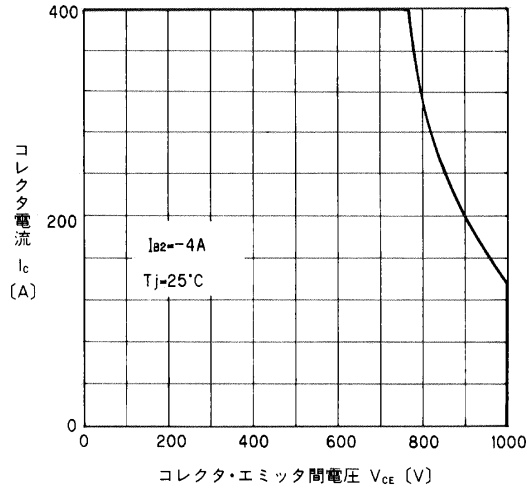
飽和電圧—コレクタ電流特性
Base and Collector Saturation Voltage



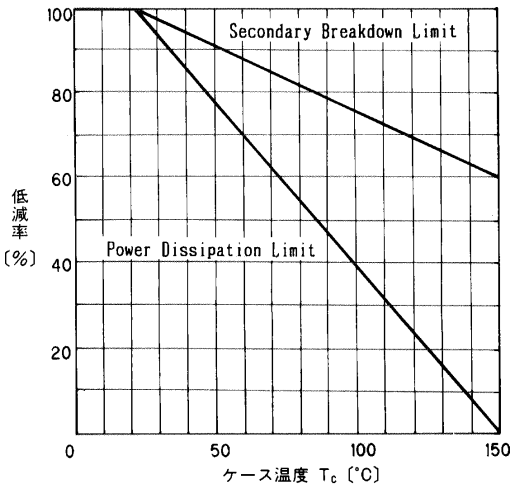
出力特性
Collector Output Characteristics



安全動作領域特性(繰返し)
Safe Operating Area



安全動作領域(逆バイアス)
Reverse Biased Safe Operating Area



ASO 低減特性
ASO Derating

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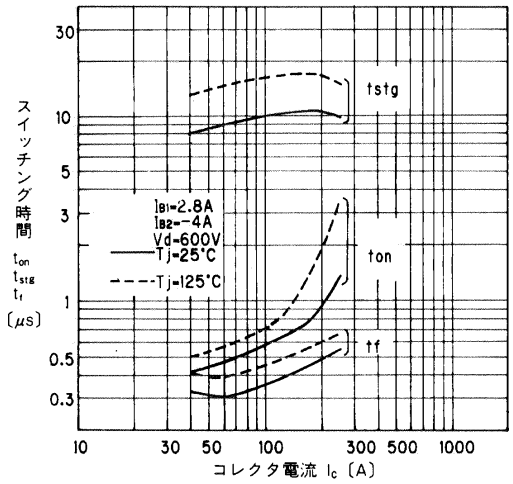
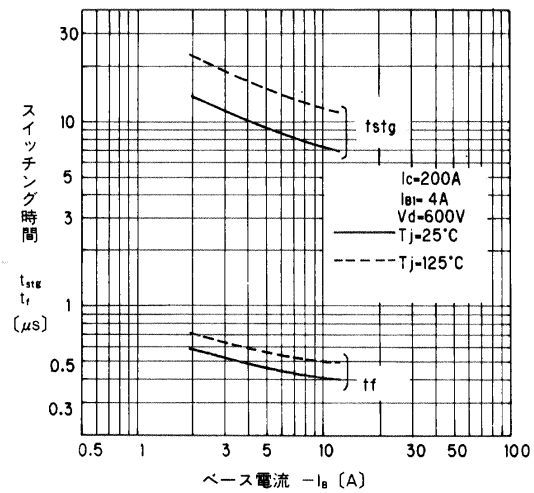
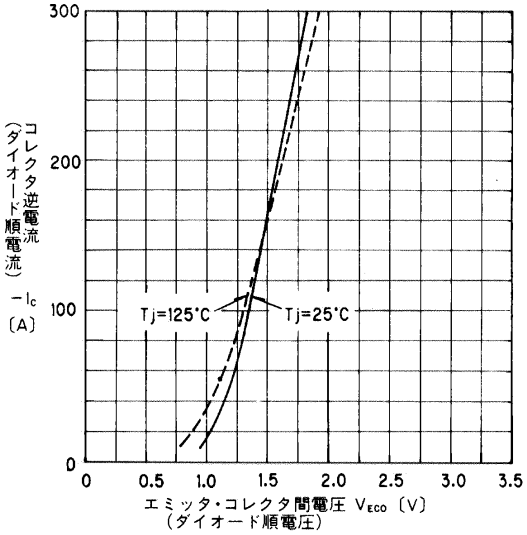


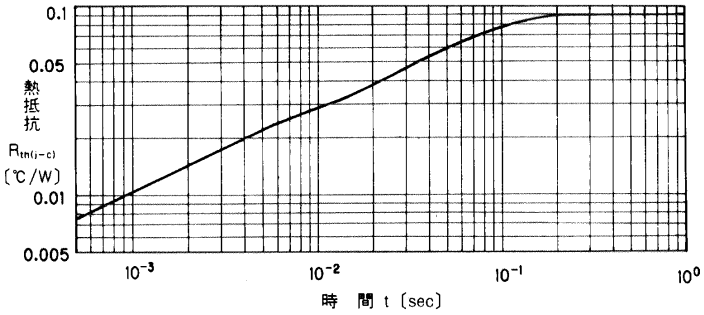
スイッチング時間—コレクタ電流特性
Switching Time



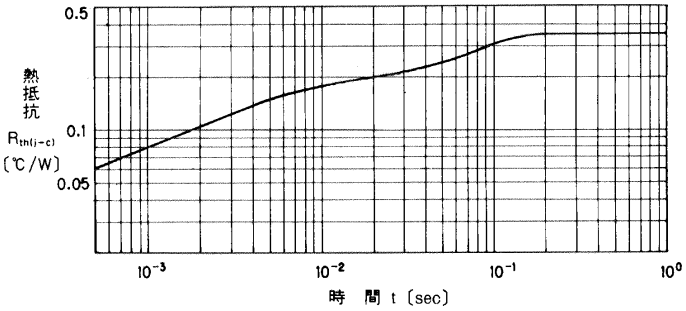
スイッチング時間—ベース電流特性
Switching Time



高速フリーホイリングダイオード順電圧
Forward Voltage of Free Wheeling Diode



過渡熱抵抗(トランジスタ)特性
Transient Thermal Resistance
(Transistor)



過渡熱抵抗(ダイオード)特性
Transient Thermal Resistance (Diode)

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