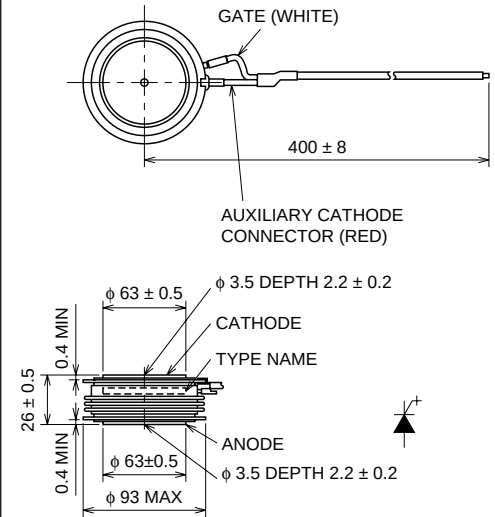


FG2000FX-50DAHIGH POWER INVERTER USE
PRESS PACK TYPE**FG2000FX-50DA**

- I_{TQRM} Repetitive controllable on-state current2200A
- $I_{T(AV)}$ Average on-state current1050A
- V_{DRM} Repetitive peak off state voltage2500V
- Anode short type

OUTLINE DRAWING

Dimensions in mm

**APPLICATION**

Inverters, D.C. choppers, Induction heaters, D.C. to D.C. converters.

MAXIMUM RATINGS

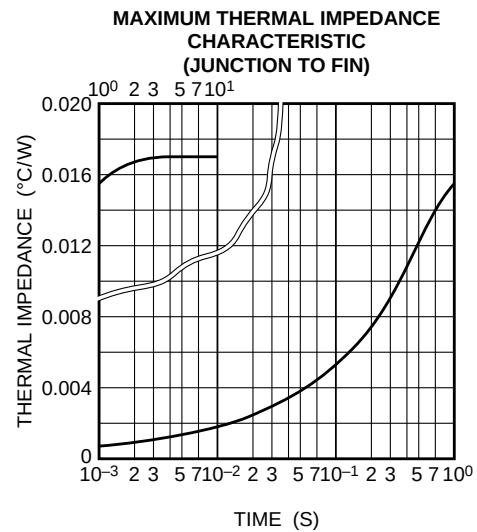
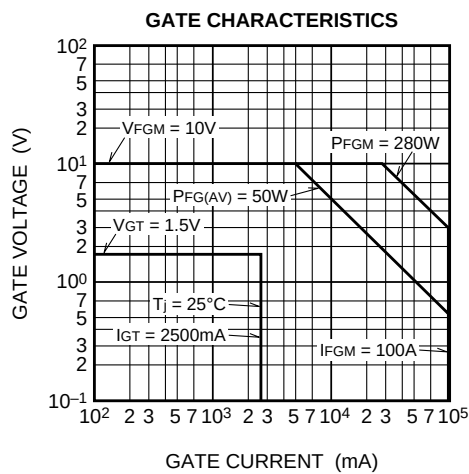
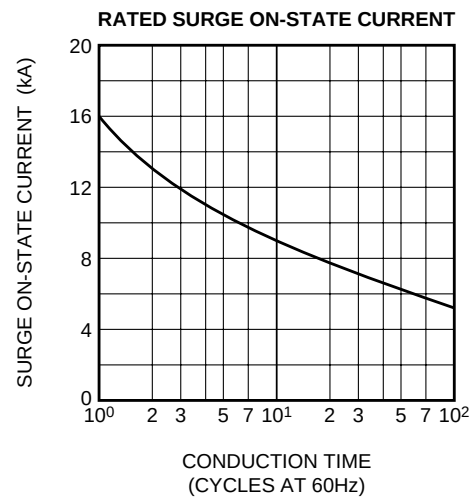
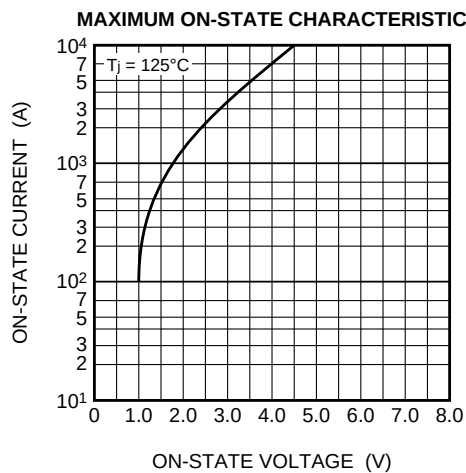
Symbol	Parameter	Voltage class	Unit
		50DA	
V_{RRM}	Repetitive peak reverse voltage	17	V
V_{RSM}	Non-repetitive peak reverse voltage	17	V
$V_{R(DC)}$	DC reverse voltage	17	V
V_{DRM}	Repetitive peak off-state voltage*	2500	V
V_{DSM}	Non-repetitive peak off-state voltage*	2500	V
$V_{D(DC)}$	DC off-state voltage*	2000	V

*: $V_{GK} = -2V$

Symbol	Parameter	Conditions	Ratings	Unit
I_{TQRM}	Repetitive controllable on-state current	$V_{DM} = 1875V$, $T_j = 125^\circ C$, $C_s = 4.0\mu F$, $L_s = 0.3\mu H$	2200	A
$I_{T(RMS)}$	RMS on-state current		1650	A
$I_{T(AV)}$	Average on-state current	$f = 60Hz$, sine wave $\theta = 180^\circ$, $T_r = 73^\circ C$	1050	A
I_{TSM}	Surge (non-repetitive) on-state current	One half cycle at 60Hz	16	kA
I^2t	Current-squared, time integration	One cycle at 60Hz	10.5×10^5	A^2s
di/dt	Critical rate of rise of on-state current	$V_D = 1250V$, $I_{GM} = 30A$, $T_j = 125^\circ C$	1000	$A/\mu s$
V_{FGM}	Peak forward gate voltage		10	V
V_{RGM}	Peak reverse gate voltage		17	V
I_{FGM}	Peak forward gate current		100	A
I_{RGM}	Peak gate reverse current		650	A
P_{FGM}	Peak forward gate power dissipation		280	W
P_{RGM}	Peak reverse gate power dissipation		18	kW
$P_{FG(AV)}$	Average forward gate power dissipation		50	W
$P_{RG(AV)}$	Average reverse gate power dissipation		150	W
T_j	Junction temperature		$-40 \sim +125$	$^\circ C$
T_{stg}	Storage temperature		$-40 \sim +150$	$^\circ C$
—	Mounting force required	Recommended value 20	18 ~ 24	kN
—	Weight	Standard value	760	g

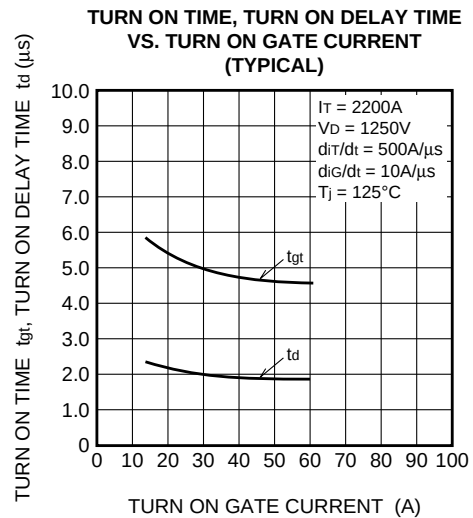
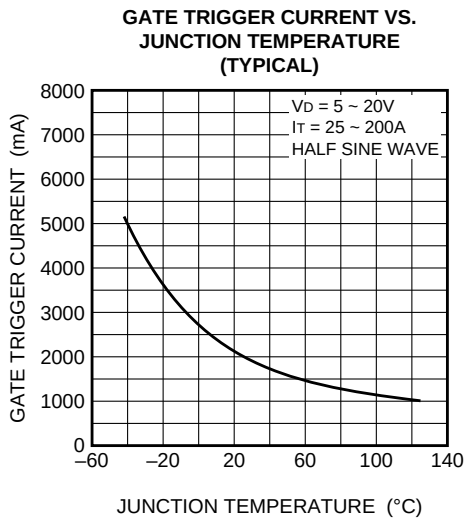
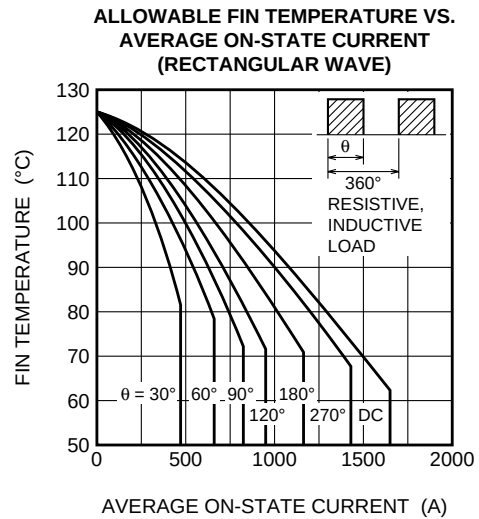
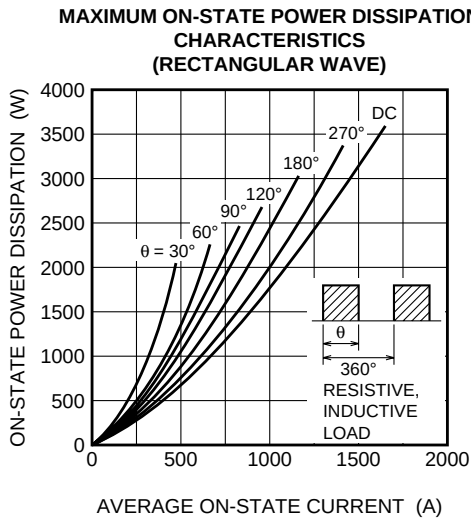
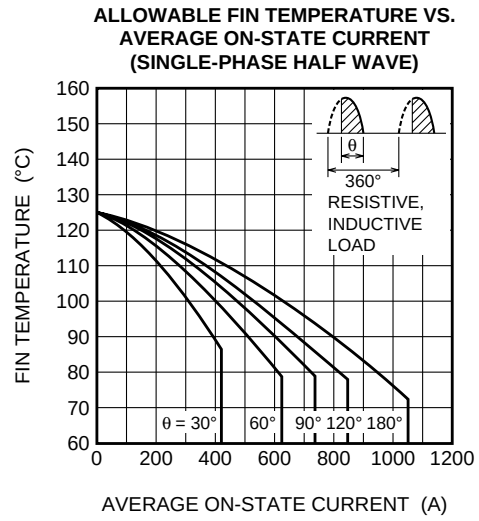
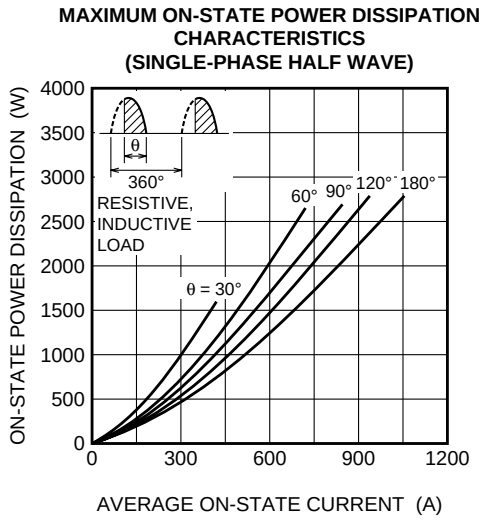
FG2000FX-50DA**HIGH POWER INVERTER USE
PRESS PACK TYPE****ELECTRICAL CHARACTERISTICS**

Symbol	Parameter	Test conditions	Limits			Unit
			Min	Typ	Max	
V _{TM}	On-state voltage	T _j = 125°C, I _{TM} = 2000A, Instantaneous measurment	—	—	2.4	V
I _{RRM}	Repetitive peak reverse current	T _j = 125°C, V _{RRM} Applied	—	—	50	mA
I _{DRM}	Repetitive peak off-state current	T _j = 125°C, V _{DRM} Applied, V _{GK} = -2V	—	—	50	mA
I _{RG}	Reverse gate current	T _j = 125°C, V _{RG} = 17V	—	—	50	mA
dv/dt	Critical rate of rise of off-state voltage	T _j = 125°C, V _D = 1250V, V _{GK} = -2V	1000	—	—	V/μs
t _{gt}	Turn-on time	T _j = 125°C, I _{TM} = 2200A, I _{GM} = 30A, V _D = 1250V	—	—	10	μs
t _{gq}	Turn-off time	T _j = 125°C, I _{TM} = 2200A, V _{DM} = 1875V, diGQ/dt = -30A/μs V _{RG} = 17V, C _S = 4.0μF, L _S = 0.3μH	—	—	30	μs
I _{GQM}	Peak gate turn-off current		—	610	—	A
V _{GT}	Gate trigger voltage	DC METHOD : V _D = 24V, R _L = 0.1Ω, T _j = 25°C	—	—	1.5	V
I _{GT}	Gate trigger current		—	—	2500	mA
R _{th(j-f)}	Thermal resistance	Junction to fin	—	—	0.017	°C/W

PERFORMANCE CURVES

FG2000FX-50DA

HIGH POWER INVERTER USE
PRESS PACK TYPE



FG2000FX-50DA

HIGH POWER INVERTER USE
PRESS PACK TYPE

