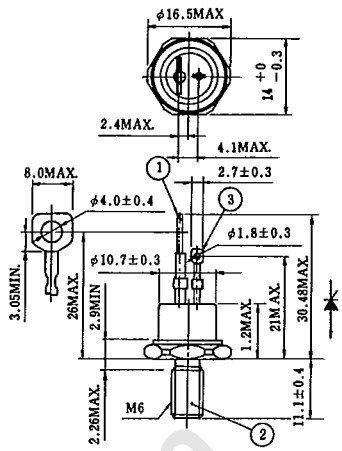
PHASE CONTROL THYRISTOR

SF16Q13 1200V 16A

Unit in mm



MAXIMUM RATINGS

CHARACTERISTIC		SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	SF16B13	V_{DRM} and V_{RRM}	100	V
	SF16D13		200	
	SF16F13		300	
	SF16G13		400	
	SF16J13		600	
	SF16L13		800	
	SF16N13		1000	
	SF16Q13		1200	
Non-Repetitive Peak Reverse Voltage (Non-Rep ≤5ms) T_j=0~125°C	SF16B13	V_{RSM}	150	V
	SF16D13		300	
	SF16F13		400	
	SF16G13		500	
	SF16J13		720	
	SF16L13		960	
	SF16N13		1200	
	SF16Q13		1440	
Average On-State Current (Half Sine Waveform)		$I_{T(AV)}$	16	A
R.M.S On-State Current		$I_{T(RMS)}$	25	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		I_{TSM}	220(60Hz)	A
			200(50Hz)	
Peak Gate Power Dissipation		P_{GM}	5	W
Average Gate Power Dissipation		$P_{G(AV)}$	0.5	W
Peak Forward Gate Current		I_{GM}	2	A
Peak Forward Gate Voltage		V_{FGM}	10	V
Peak Reverse Gate Voltage		V_{RGM}	−5	V
Junction Temperature		T_j	−65~125	°C
Storage Temperature Range		T_{stg}	−65~150	°C
Stud Torque *			30	kg cm

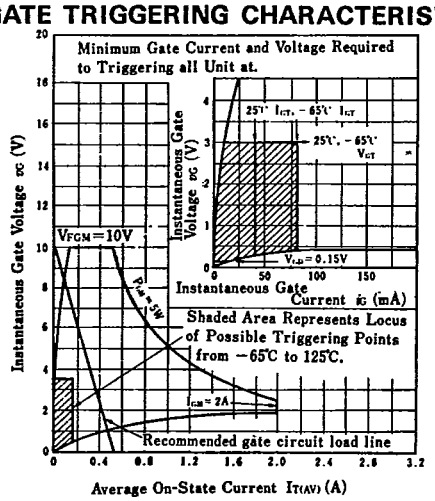
* Recommended Stud Torque 20~25kgcm

ELECTRICAL CHARACTERISTICS

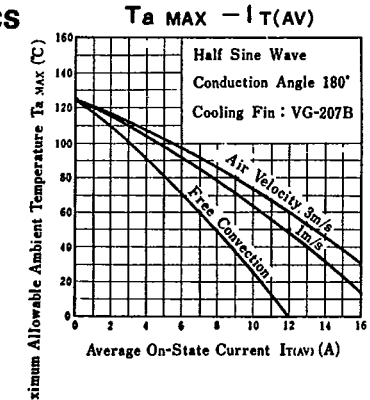
CHARACTERISTIC		SYMBOL	CONDITION		MIN.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	SF16B13	I_{DRM} and I_{RRM}	$V_{DRM}=V_{RRM}$=Rated, T_j=125°C		−	6	mA
	SF16D13					6	
	SF16F13					6	
	SF16G13					6	
	SF16J13					6	
	SF16L13					4	
	SF16N13					3	
	SF16Q13					3	
Peak On-State Voltage		V_{TM}	I_{TM}=50A, Tc=25°C		−	1.95	V
Gate Trigger Voltage		V_{GT}	V_D=6V, R_L=6Ω	Tc=−65°C	−	3	V
				Tc=25°C		3	
Gate Trigger Current		I_{GT}	V_D=6V, R_L=6Ω	Tc=−65°C	−	80	mA
				Tc=25°C		40	
Gate Non-Trigger Voltage		V_{GD}	V_D=0.5Rated, Tc=125°C		0.15	−	V
Gate Non-Trigger Current		I_{GD}	V_D=0.5Rated, Tc=125°C		0.5	−	mA
Holding Current		I_H	Tc=25°C, R_L=100Ω		−	50	mA
Thermal Resistance *		$R_{th(j-c)}$	DC		−	2	°C/W

* Junction to Case

GATE TRIGGERING CHARACTERISTICS



Ta MAX − IT(AV)



Tc MAX − IT(AV)