

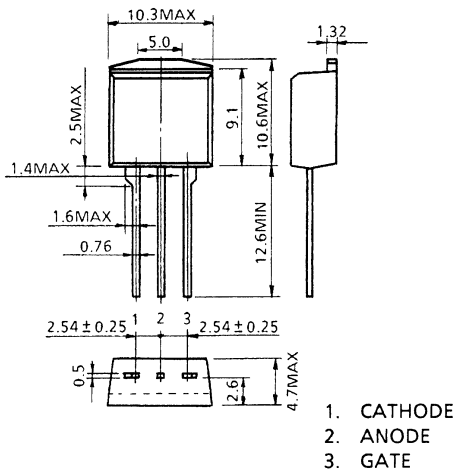
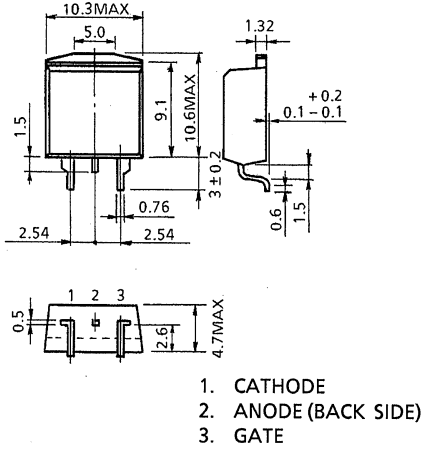
TOSHIBA THYRISTOR SILICON PLANAR TYPE

SF8G48, SF8J48, USF8G48, USF8J48

MEDIUM POWER CONTROL APPLICATIONS

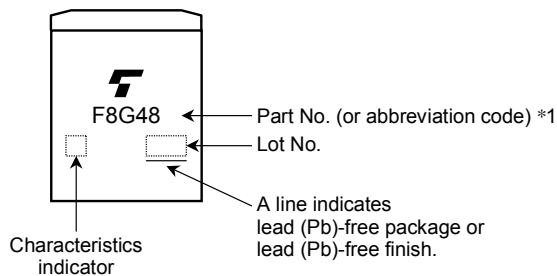
- Repetitive Peak Off-State Voltage: $V_{DRM}=400V, 600V$
Repetitive Peak Reverse Voltage: $V_{RRM}=400V, 600V$
- Average On-State Current: $I_T (AV) = 8A$
- Gate Trigger Current: $I_{GT}=10mA$ Max.

Unit: mm

SF8G48, SF8J48		USF8G48, USF8J48	
			
JEDEC	—	JEDEC	—
JEITA	—	JEITA	—
TOSHIBA	13-10J1B	TOSHIBA	13-10J2B

Weight: 1.7g

MARKING



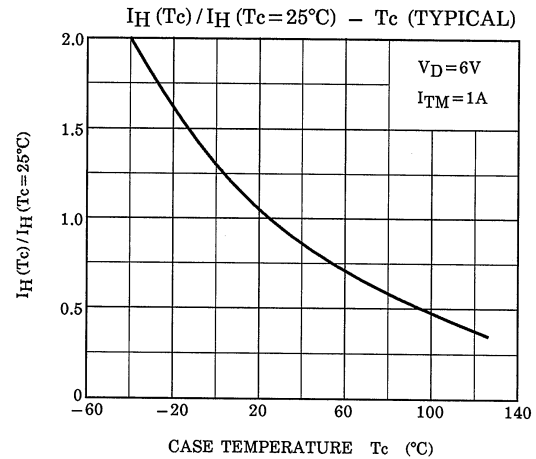
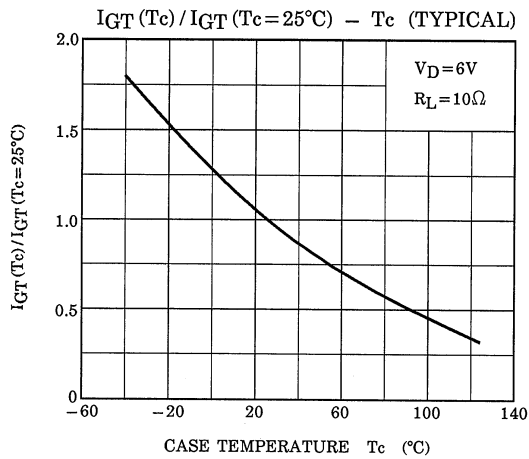
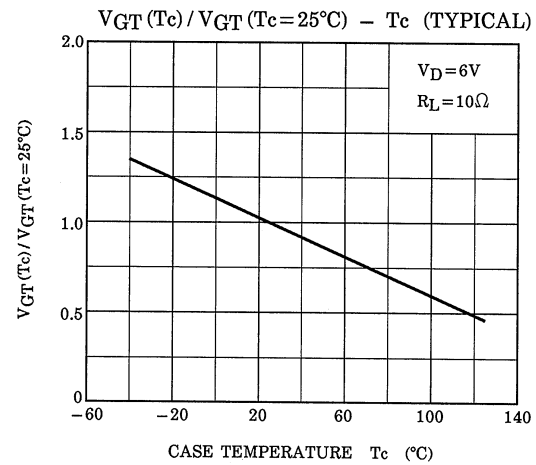
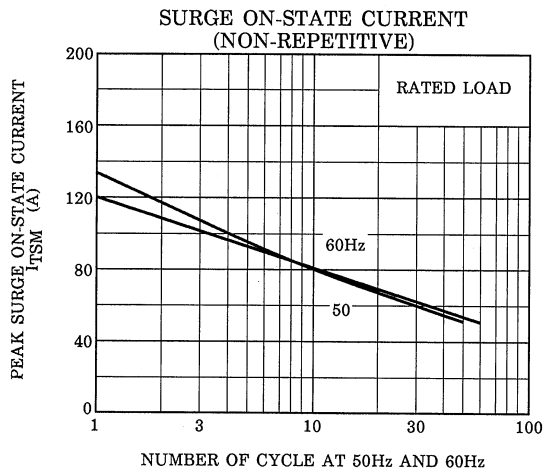
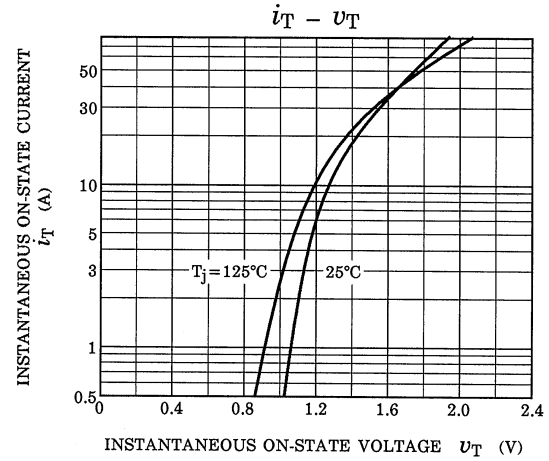
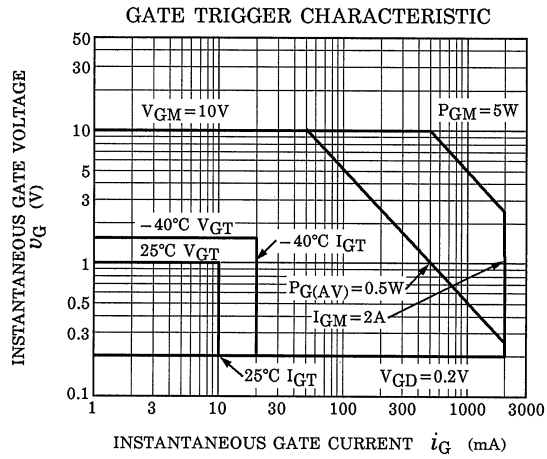
*1	Part No. (or abbreviation code)	Part No.
	F8G48	SF8G48, USF8G48
	F8J48	SF8J48, USF8J48

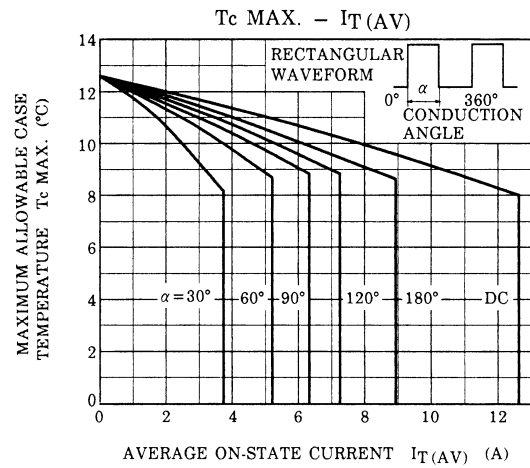
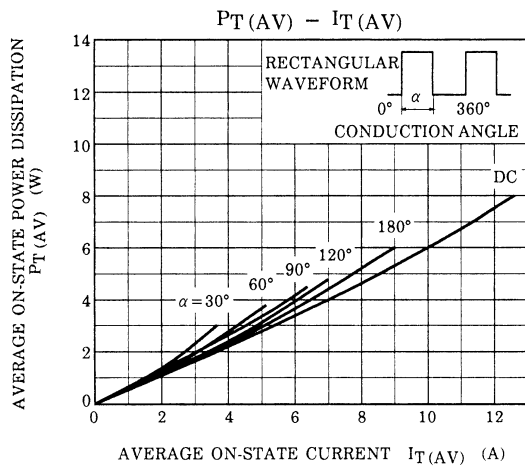
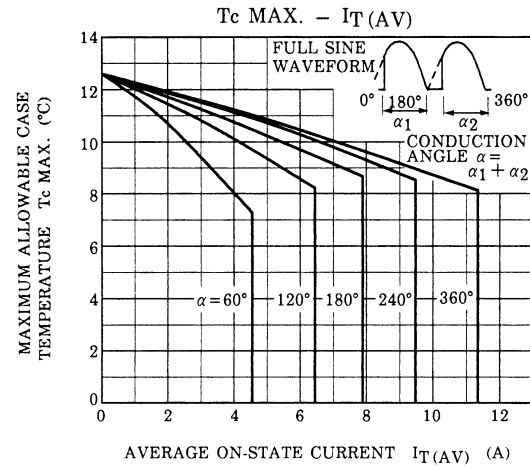
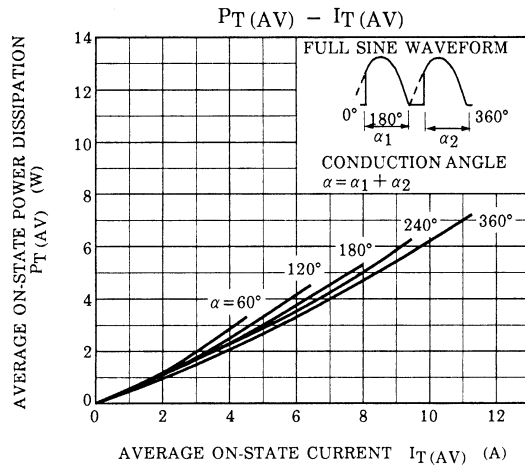
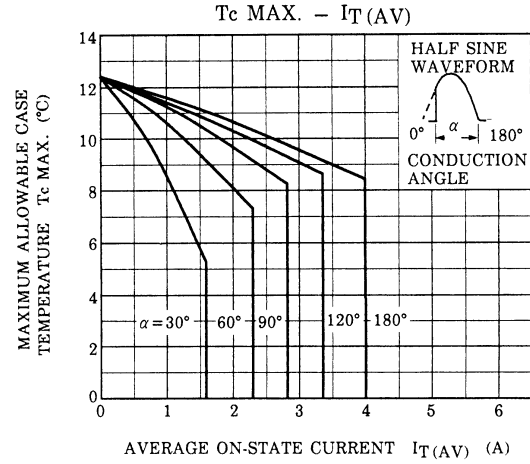
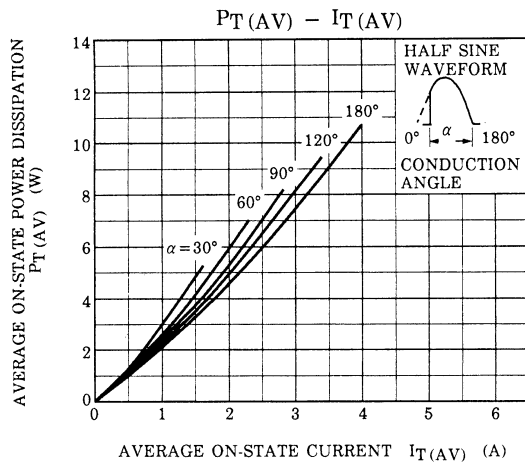
MAXIMUM RATINGS (Ta=25°C)

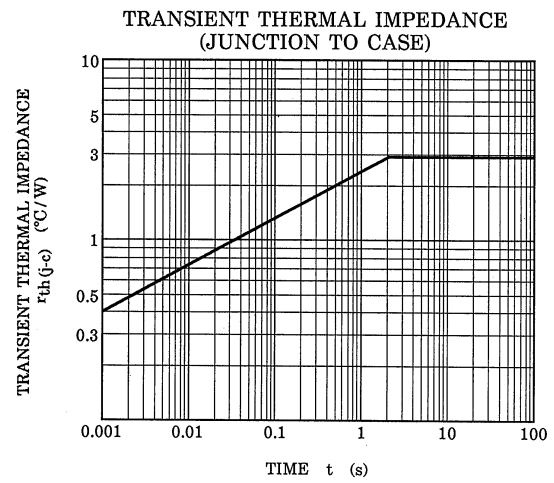
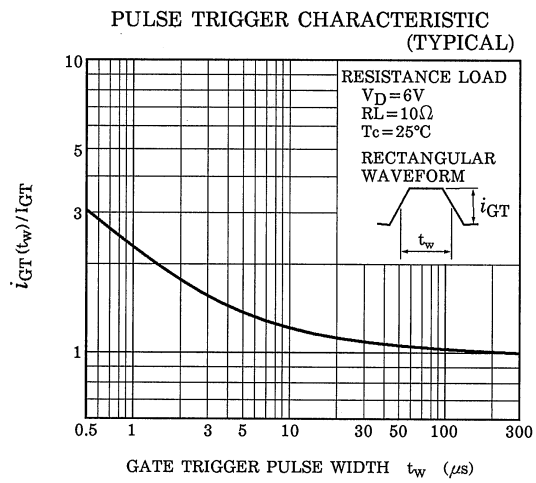
CHARACTERISTIC		SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	SF8G48	V_{DRM} V_{RRM}	400	V
	USF8G48			
	SF8J48			
	USF8J48			
Non-Repetitive Peak Reverse Voltage (Non-Repetitive<5ms $T_j=0\sim 125^{\circ}\text{C}$	SF8G48	V_{RSM}	500	V
	USF8G48			
	SF8J48			
	USF8J48			
Average On-State Current		$I_{\text{T}}(\text{AV})$	8	A
R.M.S On-State Current		$I_{\text{T}}(\text{RMS})$	12.6	A
Peak One Cycle Surge On-State Current (Non-Repetitive)		I_{TSM}	120 (50Hz)	A
			132 (60Hz)	
I^2t Limit Value		I^2t	72	A^2s
Critical Rate of Rise of On-State Curren (Note 1)		di/dt	100	$\text{A}/\mu\text{s}$
Peak Gate Power Dissipation		P_{GM}	5	W
Average Gate Power Dissition		$P_{\text{G}}(\text{AV})$	0.5	W
Peak Forward Gate Voltage		V_{FGM}	10	V
Peak Reverse Gate Voltage		V_{RGM}	-5	V
Peak Forward Gate Current		I_{GM}	2	A
Junction Temperature		T_j	-40~125	$^{\circ}\text{C}$
Strage Temperature Range		T_{stg}	-40~125	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse	I _{DRM} I _{RDM}	V _{DRM} =V _{RDM} =Rated	—	—	10	μA
Peak On-State Voltage	V _{TM}	I _{TM} =25A	—	—	1.5	V
Gate Trigger Voltage	V _{GT}	V _D =6V, R _L =10Ω	—	—	1.0	V
Gate Trigger Current	I _{GT}		—	—	10	mA
Gate Non-Trigger Voltage	V _{GD}	V _D =Rated×2 / 3, Tc=125°C	0.2	—	—	V
Critical Rate of Rise of Off-State Voltage	dv / dt	V _{DRM} =Rated, Tc=125°C Exponential Rise	—	50	—	V / μs
Holding Current	I _H	V _D =6V, I _{TM} =1A	—	—	40	mA
Latching Current	I _L	V _D =6V, f=50Hz t _{gw} =50μs, i _G =30mA	—	—	50	mA
Thermal Resistance	R _{th} (j-c)	Junction to Case, DC	—	—	2.8	°C / W







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