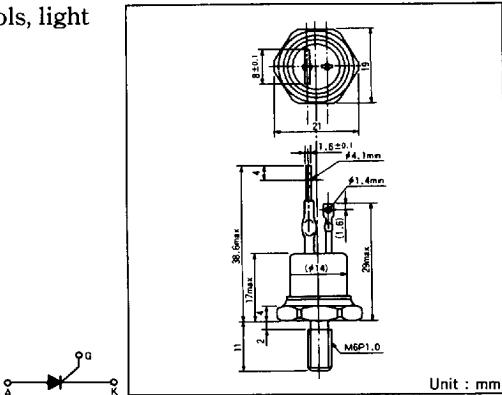


THYRISTOR
SC30C

For general phase control applications such as speed controls, light controls and welders etc.

- General power use
- $I_T = 30A$, $I_{T(RMS)} = 47A$
- High voltage up to 1200V
- High surge current of 600A
- Stud type



■Maximum Ratings

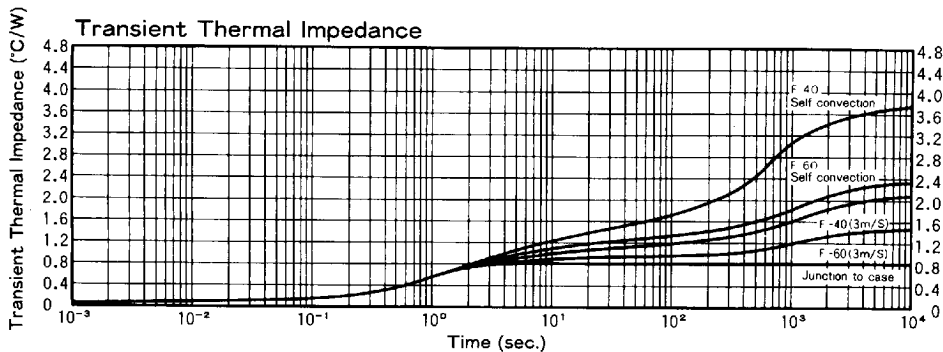
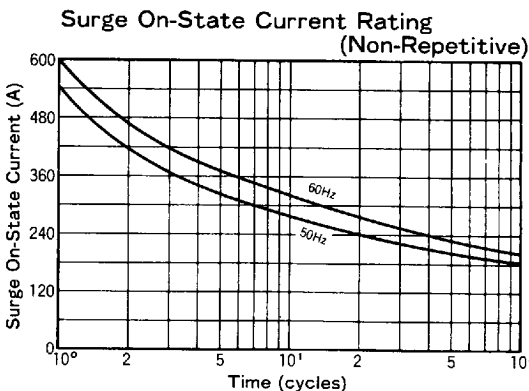
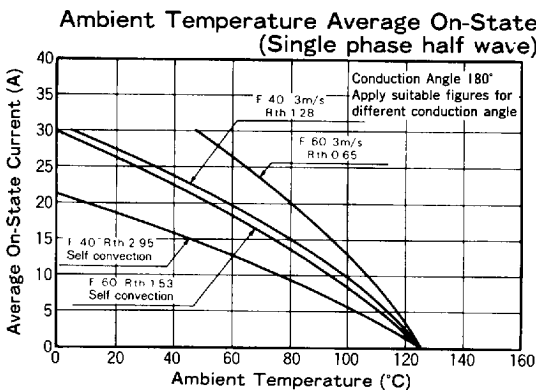
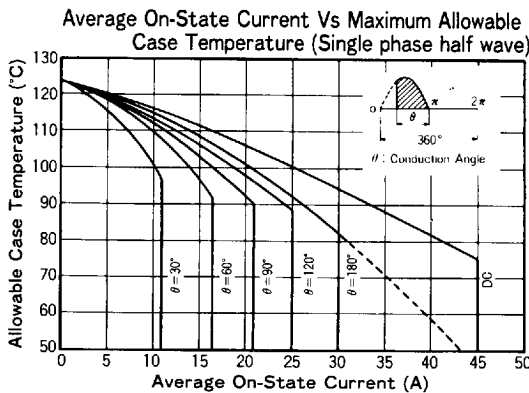
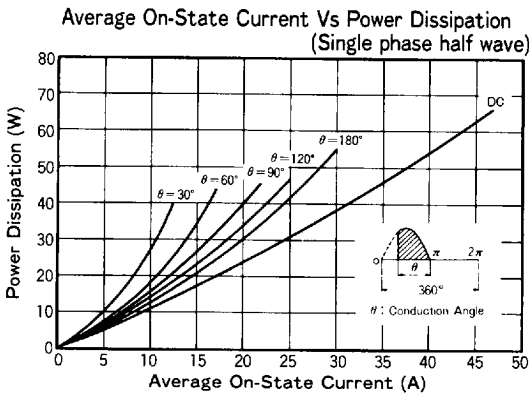
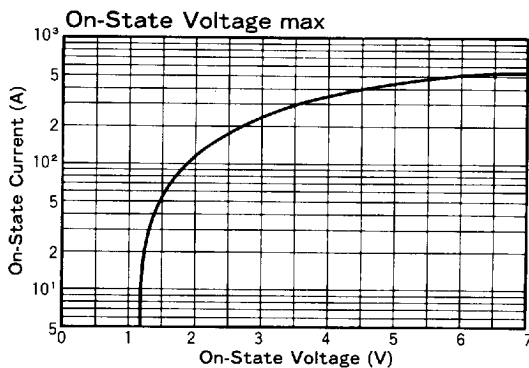
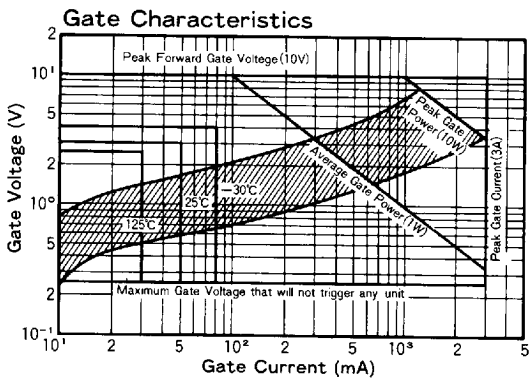
Symbol	Item	SC30C-40	SC30C-60	SC30C-80	SC30C-100	SC30C-120	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	400	600	800	1000	1200	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	480	720	960	1100	1300	V
V_{DRM}	Repetitive Peak Off-State Voltage	400	600	800	1000	1200	V

Symbol	Item	Conditions	Ratings	Unit
$I_T(AV)$	Average On-State Current	Single phase, half wave, 180° conduction, $T_c : 81^{\circ}C$	30	A
$I_{T(RMS)}$	R.M.S On-State Current	Single phase, half wave, 180° conduction, $T_c : 81^{\circ}C$	47	A
I_{TSM}	Surge On-State Current	$\frac{1}{2}$ cycle, 50Hz/60Hz, peak value, non-repetitive	540/600	A
I^2t	I^2t	Value for one cycle of surge current	1,500	A ² S
P_{GM}	Peak Gate Power Dissipation		10	W
$P_{G(AV)}$	Average Gate Power Dissipation		1	W
I_{FGM}	Peak Gate Current		3	A
V_{FGM}	Peak Gate Voltage(Forward)		10	V
V_{RGM}	Peak Gate Voltage(Reverse)		5	V
di/dt	Critical Rate of Rise of On-State Current	$I_G = 100mA$, $T_j = 25^{\circ}C$, $V_D = \frac{1}{2} V_{DRM}$, $dI_G/dt = 1A/\mu s$	100	A/ μs
T_j	Operating Junction Temperature		-30~+125	$^{\circ}C$
T_{stg}	Storage Temperature		-30~+125	$^{\circ}C$
	Mounting Torque	Recommended Value 20kgf·cm	25	kgf·cm
	Mass	Excluding nut, washer 2.6g and wrapping material 4g	22.5	g

■Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I_{DRM}	Repetitive Peak Off-State Current, max.	at V_{DRM} , single phase, half wave, $T_j = 125^{\circ}C$	5	mA
I_{RRM}	Repetitive Peak Reverse Current, max.	at V_{DRM} , single phase, half wave, $T_j = 125^{\circ}C$	5	mA
V_{TM}	Peak On-State Voltage, max.	On-State Current 100A, $T_j = 25^{\circ}C$ Inst. measurement	1.8	V
I_{GT}/V_{GT}	Gate Trigger Current/Voltage, max.	$T_j = 25^{\circ}C$, $I_T = 1A$, $V_D = 6V$	50/3	mA/V
V_{GD}	Non-Trigger Gate, Voltage, min.	$T_j = 125^{\circ}C$, $V_D = \frac{1}{2} V_{DRM}$	0.25	V
t_{gt}	Turn On Time, max	$I_T = 30A$, $I_G = 100mA$, $T_j = 25^{\circ}C$, $V_D = \frac{1}{2} V_{DRM}$, $dI_G/dt = 1A/\mu s$	10	μs
dv/dt	Critical Rate of Rise of On-State Voltage, min.	SC30C-40~60 $T_j = 125^{\circ}C$, $V_D = \frac{2}{3} V_{DRM}$	100	$V/\mu s$
		SC30C-80~120 $T_j = 125^{\circ}C$, $V_D = \frac{2}{3} V_{DRM}$	200	
I_H	Holding Current, typ.	$T_j = 25^{\circ}C$	30	mA
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	0.8	$^{\circ}C/W$

* mark : Thyristor and Diode part No mark : Thyristor part



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SANSHA ELECTRIC

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