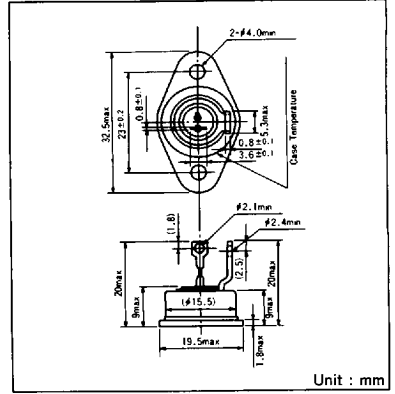
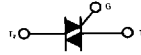


SSG16C-Y

For general A.C. power control applications such as A.C. switches, light controls, speed controls and heater controls etc.

- General A.C. power use
- $I_{T(RMS)} = 16A$
- High voltage up to 1200V
- High surge current of 160A
- Package types; diamond



Maximum Ratings

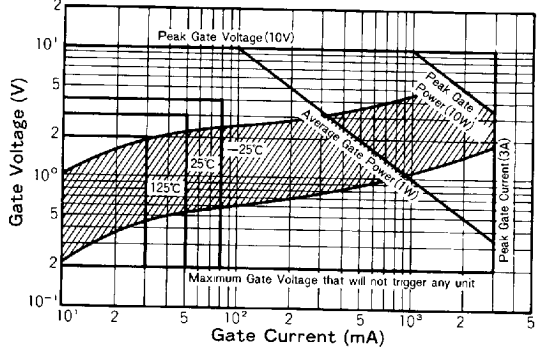
Symbol	Item	SSG16C40Y	SSG16C60Y	SSG16C80Y	SSG16C100Y	SSG16C120Y	Unit
V_{DRM}	Repetitive Peak off-State Voltage	400	600	800	1000	1200	V

Symbol	Item	Conditions	Ratings	Unit
$I_{T(RMS)}$	R.M.S On-State Current	$T_c = 82^\circ C$	16	A
I_{TSM}	Surge On-State Current	One cycle, 50/60Hz, peak, non-repetitive	140/160	A
I^2_t	I^2_t	Value for one cycle of surge current	106	A ² S
P_{GM}	Peak Gate Power Dissipation		10	W
$P_{G(AV)}$	Average Gate Power Dissipation		1	W
I_{GM}	Peak Gate Current		3	A
V_{GM}	Peak Gate Voltage		10	V
di/dt	Critical Rate of Rise of On-State Current	$I_G = 100mA$, $T_j = 25^\circ C$, $V_D = \frac{1}{2} V_{DRM}$, $di/dt = 1A/\mu s$	50	A/ μs
V_{ISO}	Isolation Breakdown Voltage(R.M.S)	A.C. 1minute	2500	V
T_j	Operating Junction Temperature		-25~+125	$^\circ C$
T_{stg}	Storage Temperature		-25~+125	$^\circ C$
	Mounting Torque	Recommended Value 8kgf·cm	10	kgf·cm
	Mass	Excluding bolt, nut and wrapping material	10.3	g

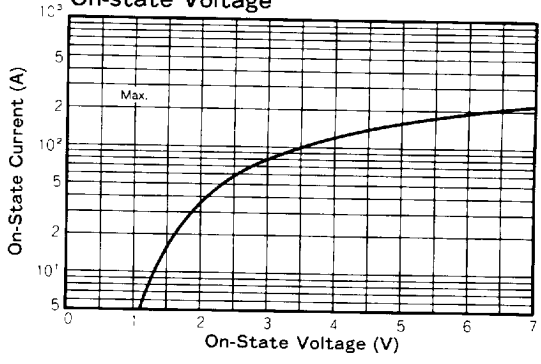
Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I_{DRM}	Repetitive Peak Off-State Current, max.	at V_{DRM} , single phase, half wave, $T_j = 125^\circ C$	3	mA
V_{TM}	Peak On-State Voltage, max.	$I_T = 25A$, $T_j = 125^\circ C$ Inst. measurement	1.7	V
I_{GT1}^+	Gate Trigger Current, max.	$T_j = 25^\circ C$, $I_T = 1A$, $V_D = 6V$	50	mA
I_{GT1}^-		$T_j = 25^\circ C$, $I_T = 1A$, $V_D = 6V$	50	
I_{GT3}^+			—	
I_{GT3}^-		$T_j = 25^\circ C$, $I_T = 1A$, $V_D = 6V$	50	
V_{GT1}^+	Gate Trigger Voltage, max.	$T_j = 25^\circ C$, $I_T = 1A$, $V_D = 6V$	3	V
V_{GT1}^-		$T_j = 25^\circ C$, $I_T = 1A$, $V_D = 6V$	3	
V_{GT3}^+			—	
V_{GT3}^-		$T_j = 25^\circ C$, $I_T = 1A$, $V_D = 6V$	3	
V_{GD}	Non-Trigger Gate Voltage, min.	$T_j = 125^\circ C$, $V_D = \frac{1}{2} V_{DRM}$	0.2	V
t_{gt}	Turn On Time, max	$I_T = 16A$, $I_G = 100mA$, $V_D = \frac{1}{2} V_{DRM}$, $T_j = 25^\circ C$, $di/dt = 1A/\mu s$	10	μs
dv/dt	Critical Rate of Rise of On-State Voltage, min.	$T_j = 125^\circ C$, $V_D = \frac{2}{3} V_{DRM}$, Exponential wave.	50	V/ μs
$[dv/dt]_c$	Critical Rate of Rise off-State Voltage at commutation, min	$T_j = 125^\circ C$, $[di/dt]_c = 8A/ms$, $V_D = \frac{2}{3} V_{DRM}$	6	V/ μs
I_H	Holding Current, typ.	$T_j = 25^\circ C$	30	mA
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to case	1.8	$^\circ C/W$

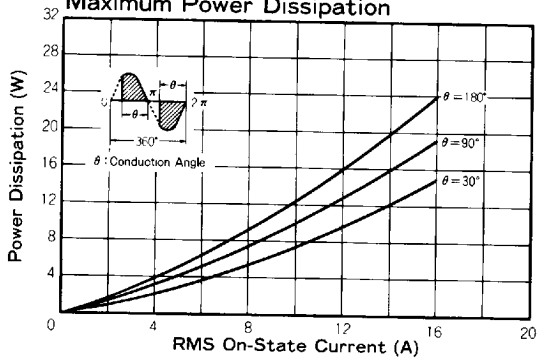
Gate Characteristics



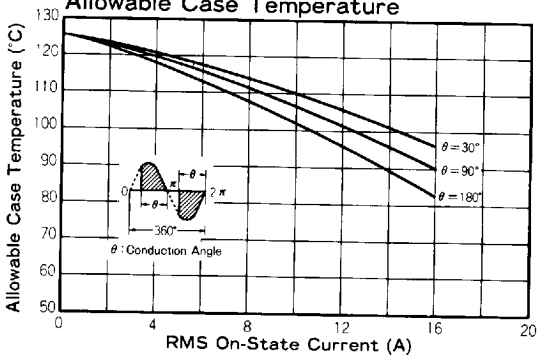
On-state Voltage



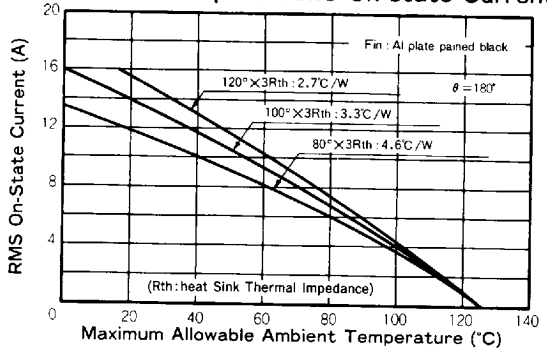
On state Current vs. Maximum Power Dissipation



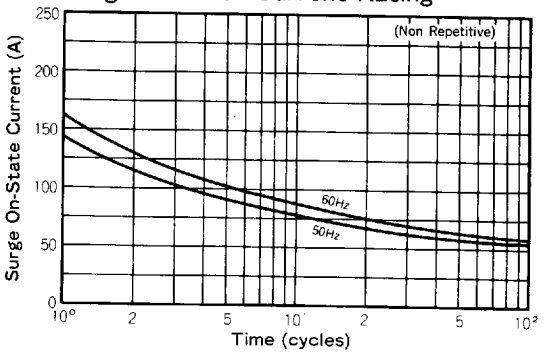
On state Current vs. Allowable Case Temperature



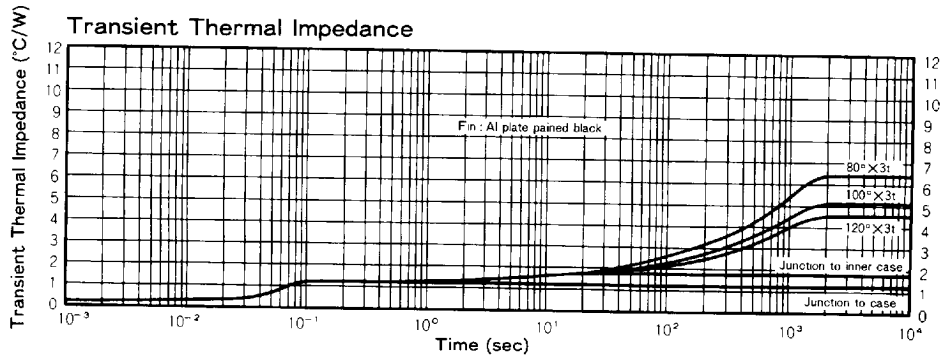
Ambient temp. vs. RMS On state Current



Surge On state Current Rating



Transient Thermal Impedance



TRIAC