

SCR Thyristor



Absolute Maximum Ratings:

Peak Repetitive Off State Blocking Voltage, V_{RRM} or V_{DRM}	600V
Peak Non Repetitive Reverse Voltage, V_{RSM} or V_{DSM}	720V
RMS On State Current, $I_{T(RMS)}$	25A
Average On State Current, ($T_C = (-40^{\circ}\text{C to } 65^{\circ}\text{C})$), $I_{T(AV)}$	16A
Peak Non Repetitive Surge Current, I_{TSM}	150A
(One cycle 60Hz preceded and followed by rated current and voltage)	
Circuit Fusing Considerations	93 A2s
($T_J = -40^{\circ}\text{C to } 125^{\circ}\text{C}$, $t = 1\text{ms to } 8.3\text{ms}$)	
Peak Gate Power P_{GM}	5W
Average Gate Power, $P_{G(AV)}$	0.5W
Peak Forward Gate Current I_{GM}	1.2A
Peak Gate Voltage Forward V_{FGM} Reverse V_{RGM}	10V 5V
Stud Torque	30in/lb
Operating Junction Temperature Range, T_J	$-65^{\circ}\text{C to } +125^{\circ}\text{C}$
Storage Temperature Range, T_{STG}	$-65^{\circ}\text{C to } +150^{\circ}\text{C}$

Electrical Characteristics: ($T_C = +25^{\circ}\text{C}$ unless otherwise specified)

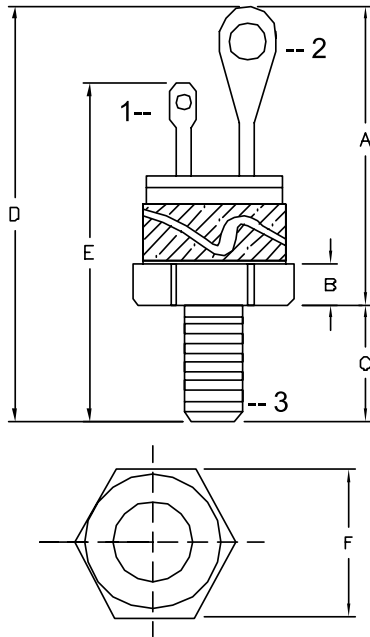
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.
Peak Forward or Reverse Blocking Current	I_{DAV} , I_{RAV}	$V_D = 600\text{V}$, gate open, $T_J = +125^{\circ}\text{C}$	-	-	2.5
Peak Forward or Reverse Blocking Current	I_{DRM} , I_{RRM}	$V_D = 600\text{V}$, gate open, $T_J = +25^{\circ}\text{C}$ $T_J = +125^{\circ}\text{C}$	-	-	10 20
Peak On State Voltage	V_{TM}	$I_{TM} = 50.3\text{A}$ Peak Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$	-	-	2
Gate Trigger Current (Continuous dc)	I_{GT}	$V_{AK} = 12\text{V}$, $R_L = 50\Omega$ $T_C = -65^{\circ}\text{C}$	-	-	80
		$V_{AK} = 12\text{V}$, $R_L = 50\Omega$ $T_C = +25^{\circ}\text{C}$	-	-	40
Gate Trigger Voltage (Continuous dc)	V_{GT}	$V_{AK} = 12\text{V}$, $R_L = 50\Omega$ $T_C = -65^{\circ}\text{C}$	-	-	3
		$V_{AK} = 12\text{V}$, $R_L = 50\Omega$ $T_C = +25^{\circ}\text{C}$	-	0.65	2
Holding Current (Gate Open)	I_H	$V_{AK} = 12\text{V}$, $T_C = +25^{\circ}\text{C}$	-	7.3	50
Gate Controlled Turn On Time	V_{GD}	$V_D = 600\text{V}$ $R_L = 50\Omega$ $T_J = +125^{\circ}\text{C}$	0.25	30	-
Critical Rate of Rise of Off State Voltage	dv/dt	$V_D = 600\text{V}$, Exponential Waveform, $T_C = +125^{\circ}\text{C}$	-	-	-



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Dimensions



Symbol	Inches	
A	1.15	
B	0.114	0.11
C	0.453	0.422
D	1.603	1.572
E	1.243	1.132
F	0.562	0.544

Part Number Table

Description	Part Number
SCR Thyristor	2N690

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