SCR Thyristor

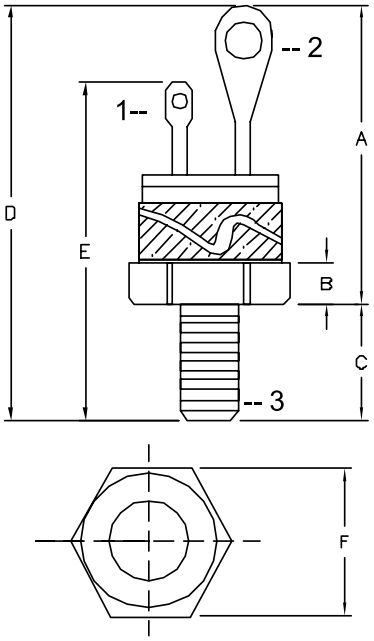
Absolute Maximum Ratings:

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°C to 65°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°C to125°C, t = 1ms to 8.3ms)	
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°C to +125°C
Storage Temperature Range, T_{STG}	-65°C to +150°C

Electrical Characteristics: (T_C = +25°C unless otherwise specified)

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

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