

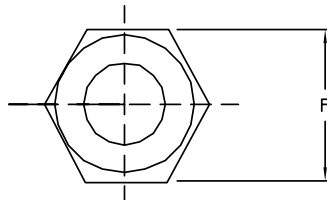
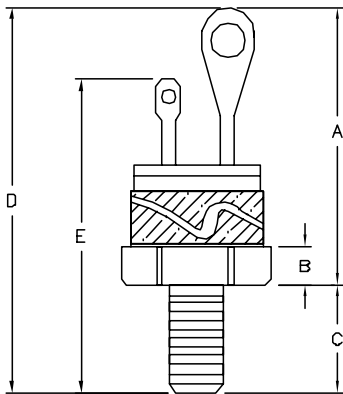
### Absolute Maximum Ratings:

Characteristic	Symbol	Rating
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 (One cycle 60Hz preceded and followed by rated current and voltage)	$I_{TSM}$	150A
Circuit Fusing Considerations ( $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ , $t = 1$ to $8.3$ ms)	-	93 A2s
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 Reverse	$V_{FGM}$ $V_{RGM}$	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 ( $T_A = 25^{\circ}\text{C}$ 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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.
Holding Current (Gate Open)	$I_H$	$V_{AK} = 12V, T_c = 25^\circ C$	-	7.3	50
Gate Controlled Turn On Time	$V_{GD}$	$V_D = 600V; R_L = 50\Omega; T_J = 125^\circ C$	0.25	-	-
Critical Rate of Rise of Off State Voltage	$dv/dt$	$V_D = 600V; \text{Exponential Waveform}, T_c = 125^\circ C$	-	30	-



Dimensions	
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

Dimensions : Inches

## Part Number Table

Description	Part Number
Thyristor, 16A, 600V, TO-208AA (TO-48)	2N690

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