T500148004AQ

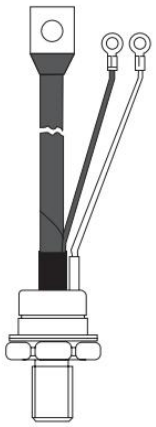
Phase Control Thyristors

FEATURES

- High surge current capability
- Low gate current
- Low V_{TM}
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Phase control
- Motor control
- Power supplies



TO-209AB (TO-94)

ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	CONDITIONS		VALUE	UNIT
V_{RRM}	Repetitive Peak Reverse Voltage			1400	V
$I_{T(AV)}$	Average Forward Current	T_C=85℃, 180° conduction, half sine wave		80	A
$I_{T(RMS)}$	RMS on-state current	DC, T_C=78℃		360	A
I_{TSM}	Surge Forward Current	t=10ms	No voltage reapplied	5700	A
		t=8.3ms		5970	
		t=10ms	100%V_{RRM} reapplied	4800	
		t=8.3ms		5000	
I^2t	I^2t for fusing	t=10ms	No voltage reapplied	163	KA_2s
		t=8.3ms		148	
		t=10ms	100%V_{RRM} reapplied	115	
		t=8.3ms		105	
T_J	Junction Temperature			-65~200	℃
T_{stg}	Storage Temperature Range			-65~200	℃

THERMAL CHARACTERISTICS

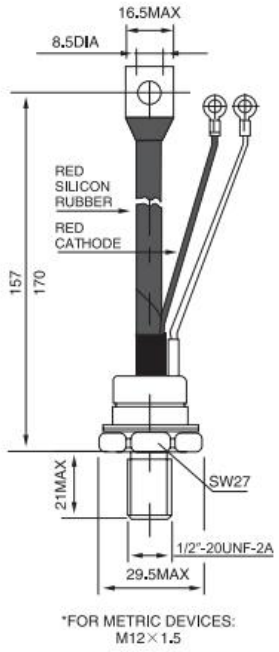
SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	0.18	℃/W

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{TM}	Forward Voltage Drop	I_{pk}= 300A, T_J = T_J max, tp = 10ms sine pulse	1.55	V
I_{DRM} I_{RRM}	peak reverse and off-state leakage current	T_J = 125 ℃, rated VDRM/VRRM applied	10	mA
I_{GT}	DC gate current required to trigger	V_D=6V,T_J = 25 ℃	150	mA
V_{GT}	DC gate voltage required to trigger	V_D=6V,T_J = 25 ℃	3	V
t_q	Typical turn-off time	T_M = 175A, T_J = T_J max, di/dt = 20A/μs, V_R = 50V, dv/dt = 20V/μs, Gate 0V 100Ω, tp = 500μs	100	μs

PACKAGE OUTLINE

Dimensions in mm (1mm = 0.0394“)



Case Style TO-94

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