

MCR1906 SERIES

SILICON CONTROLLED RECTIFIERS

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS. ($T_J = 100^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Peak reverse blocking voltage			
MCR1906-1	V_{RRM}	25	Volts
MCR1906-2		50	
MCR1906-3		100	
MCR1906-4		200	
MCR1906-5		300	
MCR1906-6		400	
MCR1906-7		500	
MCR1906-8		600	
Forward current RMS (all conduction angles)	$I_{T(RMS)}$	1.6	Amps
Peak forward surge current (1 cycle, 60 Hz, $T_J = -40$ to $+100^\circ\text{C}$)	I_{TSM}	15	Amps
Forward peak gate power	P_{GM}	0.1	Watts
Forward average gate power	$P_{G(AV)}$	0.01	Watts
Forward peak gate current	I_{GM}	0.1	Amps
Forward peak gate voltage	V_{GFM}	6.0	Volts
Reverse peak gate voltage	V_{GRM}	6.0	Volts
Operating junction temperature range	T_J	-65 to +100	$^\circ\text{C}$
Storage temperature range	T_{stg}	-65 to +150	$^\circ\text{C}$
Lead solder temperature (<1/16" from case, 10 sec. max.)	-	+230	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted, $R_{GK} = 1000\Omega$)

Characteristic	Symbol	Min	Max	Unit
Peak forward blocking voltage ⁽¹⁾				
MCR1906-1	V_{DRM}	25	-	Volts
MCR1906-2		50	-	
MCR1906-3		100	-	
MCR1906-4		200	-	
MCR1906-5		300	-	
MCR1906-6		400	-	
MCR1906-7		500	-	
MCR1906-8		600	-	
Peak forward blocking current (Rated V_{DRM} @ $T_J = 100^\circ\text{C}$)	I_{DRM}	-	500	μA
Peak reverse blocking current (Rated V_{RRM} @ $T_J = 100^\circ\text{C}$)	I_{RRM}	-	500	μA
Forward "on" voltage ($I_{TM} = 1.0\text{A}$ peak)	V_{TM}	-	1.75	Volts
Gate trigger current (continuous dc) ⁽²⁾ ($V_{AK} = 7\text{Vdc}$, $R_L = 100\Omega$, $T_C = 25^\circ\text{C}$)	I_{GT}	-	1.0	mA
Gate trigger voltage (continuous dc) ($V_{AK} = 7\text{Vdc}$, $R_L = 100\Omega$, $T_C = 25^\circ\text{C}$) ($V_{AK} = \text{Rated } V_{DRM}$, $R_L = 100\Omega$, $T_J = 100^\circ\text{C}$)	V_{GT} V_{GD}	- 0.1	1.0 -	Volts

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Holding current

($V_{AK} = 7V_{dc}$)

I_H

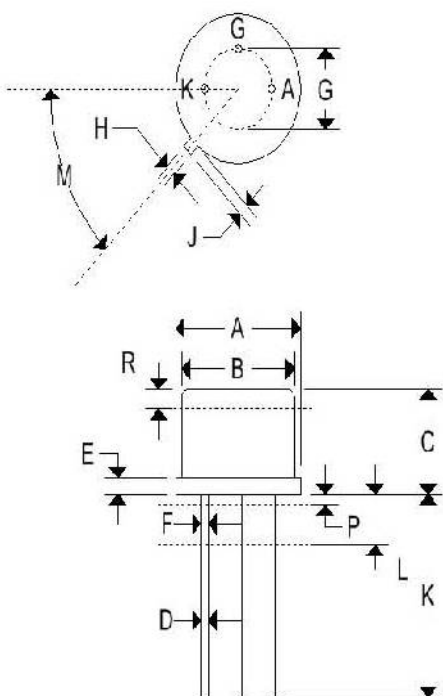
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5.0

mA

MECHANICAL CHARACTERISTICS

Case:	TO-39
Marking:	Body painted, alpha-numeric
Pin out:	See below



	TO-39			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.335	0.370	8.510	9.390
B	0.305	0.335	7.750	8.500
C	0.240	0.260	6.100	6.600
D	0.016	0.021	0.410	0.530
E	0.009	0.041	0.230	1.040
F	0.016	0.019	0.410	0.480
G	0.200 BSC		5.080 BSC	
H	0.028	0.034	0.720	0.860
J	0.029	0.045	0.740	1.140
K	0.500	0.750	12.700	19.050
L	0.250	-	6.350	-
M	45° BSC		45° BSC	
P	-	0.050	-	1.270
R	0.100	-	2.540	-

