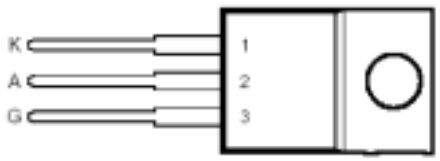
TIC106 Series(5A SCRS)

5A Continuous On-State Current

400V to 800V Off-State Voltage

Max I_{GT} of 200 μA

TO-220 PACKAGE



ABSOLUTE RATING

Symbol	Parameter		Value	Units
V_{DRM}	Repetitive peak off-state voltage	TIC106D TIC106M TIC106S TIC106N	400 600 700 800	V
V_{RRM}	Repetitive peak raverse voltage	TIC106D TIC106M TIC106S TIC106N	400 600 700 800	V
$I_{T(RMS)}$	Continuous on-state current at(or below) 80℃ case temperature		5	A
$I_{T(AV)}$	Average on-state current(180℃ conduction angle) at (or below) 80℃ case temperature		3.2	A
I_{TM}	Surge on-state current		30	A
I_{GM}	Peak positive gate current(pulse width≤300 μs)		0.2	A
P_{GM}	Peak gate power dissipation(pulse width≤300 μs)		1.3	W
$P_{G(AV)}$	Average gate power dissipation		0.3	W
T_C	Operating case temperature range		-40～110	℃
T_{stg}	Storage temperature		-40～125	℃

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
Rth(j-c)	Junction to case thermal resistance	3.5	℃/W
Rtj(j-a)	Junction to free air thermal resistance	62.5	℃/W

ELECTRICAL CHARACTERISTICS at 25℃ case temperature

Symbol	Testing conditions	Min.	Typ.	Max.	Unit
I_{GT}	V_{AA}=6V, R_L=100Ω, $t_{p(g)}$≥20μs	-	60	200	μA
V_{GT}	V_{AA}=6V, R_L=100Ω, T_C=-40℃ $t_{p(g)}$≥20μs, R_{GK}=1KΩ	-	-	1.2	V
	V_{AA}=6V, R_L=100Ω, $t_{p(g)}$≥20μs, R_{GK}=1KΩ	0.4	0.6	1	
	V_{AA}=6V, R_L=100Ω, T_C=110℃ $t_{p(g)}$≥20μs, R_{GK}=1KΩ	0.2	-	-	
I_H	V_{AA}=6V, R_{GK}=1KΩ, T_C=-40℃ Initiating I_T=10mA	-	-	8	mA
	V_{AA}=6V, R_{GK}=1KΩ, Initiating I_T=10mA	-	-	5	
V_{TM}	I_{TM}=5A	-	-	1.7	V
I_{DRM}	V_D=ratedV_{DRM}, R_{GK}=1KΩ, T_C=110℃	-	-	400	μA
I_{RRM}	V_R=ratedV_{RRM}, I_G=0, T_C=110℃	-	-	1	mA
dv/dt	V_D=rated V_D, R_{GK}=1KΩ, T_C=110℃	-	10	-	V/μs