

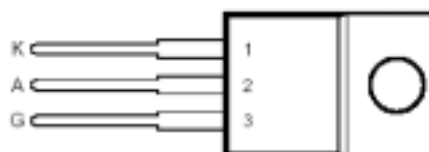
TIC106 Series(5A SCRS)

5A Continuous On-State Current

TO-220 PACKAGE

400V to 800V Off-State Voltage

Max I_{GT} of 200 μA



ABSOLUTE RATING

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

THERMAL RESISTANCE

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

ELECTRICAL CHARACTERISTICS at 25 °C 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°C 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°C t _{p(g)} ≥20μs, R _{GK} =1KΩ	0.2	-	-	
I _H	V _{AA} =6V, R _{GK} =1KΩ, T _C =-40°C 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°C	-	-	400	μA
I _{RRM}	V _R =ratedV _{RRM} , I _G =0, T _C =110°C	-	-	1	mA
dv/dt	V _D =rated V _D , R _{GK} =1KΩ, T _C =110°C	-	10	-	V/μs