

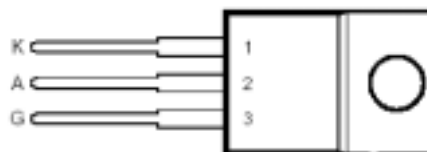
TIC126 Series(12A SCRS)

12A Continuous On-State Current

TO-220 PACKAGE

400V to 800V Off-State Voltage

Max I_{GT} of 20mA



ABSOLUTE RATING

Symbol	Parameter	Value	Units
V_{DRM}	Repetitive peak off-state voltage	TIC126D	400
		TIC126M	600
		TIC126S	700
		TIC126N	800
V_{RRM}	Repetitive peak raverse voltage	TIC126D	400
		TIC126M	600
		TIC126S	700
		TIC126N	800
$I_{T(RMS)}$	Continuous on-state current at(or below) 80 case temperature	12	A
$I_{T(AV)}$	Average on-state current(180 conduction angle) at (or below) 80 case temperature	7.5	A
I_{TM}	Surge on-state current	100	A
I_{GM}	Peak positive gate current(pulse width 300 μ s)	3	A
P_{GM}	Peak gate power dissipation(pulse width 300 μ s)	5	W
$P_{G(AV)}$	Average gate power dissipation	1	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	2.4	/W
Rtj(j-a)	Junction to free air thermal resistance	62.5	/W

ELECTRICAL CHARACTERISTICS at 25 °C case temperature

Symbol	Testing conditions	Min.	Typ.	Max.	Unit
I_{GT}	V_{AA}=6V, R_L=100 Ω, t_{p(g)} 20 μs	-	5	20	mA
V_{GT}	V_{AA}=6V, R_L=100 Ω, T_C=-40 °C, t_{p(g)} 20 μs, R_{GK}=1K	-	-	2.5	V
	V_{AA}=6V, R_L=100 Ω, t_{p(g)} 20 μs, R_{GK}=1K	-	0.8	1.5	
	V_{AA}=6V, R_L=100 Ω, T_C=110 °C, t_{p(g)} 20 μs, R_{GK}=1K	0.2	-	-	
I_H	V_{AA}=6V, R_{GK}=1K, T_C=-40 °C, Initiating I_T=100mA	-	-	70	mA
	V_{AA}=6V, R_{GK}=1K, Initiating I_T=100mA	-	-	40	
V_{TM}	I_{TM}=12A	-	-	1.4	V
I_{DRM}	V_D=rated V_{DRM}, R_{GK}=1K, T_C=110 °C	-	-	2	mA
I_{RRM}	V_R=rated V_{RRM}, I_G=0, T_C=110 °C	-	-	2	mA
dv/dt	V_D=rated V_D, R_{GK}=1K, T_C=110 °C	-	100	-	V/ μs