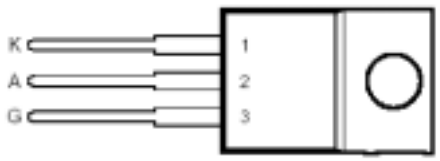
TIC116 Series(8A SCRS)

8A Continuous On-State Current

400V to 800V Off-State Voltage

Max I_{GT} of 20mA

TO-220 PACKAGE



ABSOLUTE RATING

Symbol	Parameter		Value	Units
V_{DRM}	Repetitive peak off-state voltage	TIC116D TIC116M TIC116S TIC116N	400 600 700 800	V
V_{RRM}	Repetitive peak raverse voltage	TIC116D TIC116M TIC116S TIC116N	400 600 700 800	V
$I_{T(RMS)}$	Continuous on-state current at(or below) 80℃ case temperature		8	A
$I_{T(AV)}$	Average on-state current(180℃ conduction angle) at (or below) 80℃ case temperature		5	A
I_{TM}	Surge on-state current		80	A
I_{GM}	Peak positive gate current(pulse width≤300μs)		3	A
P_{GM}	Peak gate power dissipation(pulse width≤300μs)		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	3	℃/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}=12V, R_L=100Ω, $t_{p(g)}$≥20μs	-	8	20	mA
V_{GT}	V_{AA}=12V, R_L=100Ω, T_C=-40℃ $t_{p(g)}$≥20μs, R_{GK}=1KΩ	-	-	2.5	V
	V_{AA}=12V, R_L=100Ω, $t_{p(g)}$≥20μs, R_{GK}=1KΩ	-	0.8	1.5	
	V_{AA}=12V, R_L=100Ω, T_C=110℃ $t_{p(g)}$≥20μs, R_{GK}=1KΩ	0.2	-	-	
I_H	V_{AA}=12V, R_{GK}=1KΩ, T_C=-40℃ Initiating I_T=100mA	-	-	100	mA
	V_{AA}=12V, R_{GK}=1KΩ, Initiating I_T=100mA	-	-	40	
V_{TM}	I_{TM}=8A	-	-	1.7	V
I_{DRM}	V_D=ratedV_{DRM}, R_{GK}=1KΩ, T_C=110℃	-	-	2	mA
I_{RRM}	V_R=ratedV_{RRM}, I_G=0, T_C=110℃	-	-	2	mA
dv/dt	V_D=rated V_D, R_{GK}=1KΩ, T_C=110℃	-	400	-	V/μs