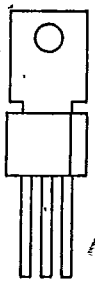
Reference No. SA01TY23

DIGITRON

DGE

TM-03



C107

at DGE 092386

Silicon Controlled Rectifier

Flat Pack Design

Up to 600 Volts 4 Amperes (RMS)

Model C107

C107

MAXIMUM ALLOWABLE RATINGS

Type	Repetitive Peak Off-State Voltage, V_{DRM} R_{GK} = 1000 Ohms T_C = −40°C to +110°C	Working and Repetitive Peak Reverse Voltage, V_{RWM} and V_{RRM} T_C = −40°C to +110°C
C107Q1, C107Q2, C107Q3, C107Q4	15 Volts	15 Volts
C107Y1, C107Y2, C107Y3, C107Y4	30 Volts	30 Volts
C107F1, C107F2, C107F3, C107F4	50 Volts	50 Volts
C107A1, C107A2, C107A3, C107A4	100 Volts	100 Volts
C107B1, C107B2, C107B3, C107B4	200 Volts	200 Volts
C107C1, C107C2, C107C3, C107C4	300 Volts	300 Volts
C107D1, C107D2, C107D3, C107D4	400 Volts	400 Volts
C107E1, C107E2, C107E3, C107E4	500 Volts	500 Volts
C107M1, C107M2, C107M3, C107M4	600 Volts	600 Volts

CHARACTERISTICS

Test	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Peak Reverse and Off-State Current (All Types)	I_{RRM} or I_{DRM}	–	0.1	10	μA	$V_{RRM} = V_{DRM}$ = Rated Value. T_L = 25°C, R_{GK} = 1000 Ohms
		–	10	100	μA	$V_{RRM} = V_{DRM}$ = Rated Value. T_L = 110°C, R_{GK} = 1000 Ohms.
*DC Gate Trigger Current	I_{GT}	–	–	500	μAdc	T_L = 25°C, V_D = 6 Vdc, R_L = 100 Ohms. R_{GK} = 1000 Ohms.
DC Gate Trigger Voltage	V_{GT}	0.4	0.5	0.8	Volts DC	T_L = 25°C, V_D = 6 Vdc, R_L = 100 Ohms. R_{GK} = 1000 Ohms.
		0.2	–	–	Volts DC	T_L = 110°C. Rated V_{DRM} R_L = 3000 Ohms, R_{GK} = 1000 Ohms.
Peak On-State Voltage	V_{TM}	–	2.2	2.5	Volts	T_L = 25°C, I_{TM} = 4 Amperes Peak, Single Half Sine Wave Pulse, 2 Millisec. Wide.
Holding Current	I_H	0.3	2.0	6.0	mAdc	T_L = 25°C, Anode Supply = 12 Vdc, R_{GK} = 1000 Ohms.
		0.14	1.2	4.0	mAdc	T_L = 110°C, Anode Supply = 12 Vdc, R_{GK} = 1000 Ohms.
Latching Current	I_L	0.3	3.0	8.0	mAdc	T_L = 25°C, Anode Supply = 12 Vdc, R_{GK} = 1000 Ohms.
Critical Rate of Rise of Off-State Voltage	dv/dt	–	8	–	Volts/ Micro-second	T_L = 110°C, Rated V_{DRM} R_{GK} = 1000 Ohms.
Turn-On Time	$t_d + t_r$	–	1.2	–	Micro-seconds	T_L = 25°C, Rated V_{DRM} I_{TM} = 1 Ampere, Gate Pulse = 4 Volts, 300 Ohms, 5 Microseconds Wide.
Circuit Commutated Turn-Off Time	t_q	–	40	100	Micro-seconds	T_L = 110°C, rectangular current waveform. Rate of Rise of current < 10 amps/μsec. Rate of reversal of current < 5 amps/μsec. I_{TM} = 1 Amp (50 μsec. pulse). Repetition Rate = 60 pps. Rated V_{RRM} V_R = 15 Volts Minimum. Rated V_{DRM} Rate of Rise Reapplied Forward Blocking Voltage = 5 Volts/μsec. Gate Bias = 0 Volts, 100 Ohms (during turn-off time interval).

8001-4242 EDITOR