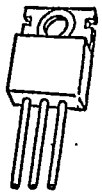
Reference SA0.1TY23

DIGITRON

092386 TY-03



alt 092386 DGE

SCR

C122

8 A RMS Up to 600 Volts

MAXIMUM ALLOWABLE RATINGS

Type	Repetitive Peak Off-State Voltage, V_{DRM}(3) T_C = -40°C to +100°C	Repetitive Peak Reverse Voltage, V_{RRM}(1)(3) T_C = -40°C to +100°C	Non-Repetitive Peak Reverse Voltage, V_{RSM}(1)(2) T_C = -40°C to +100°C
C122F	50 Volts	50 Volts	75 Volts
C122A	100 Volts	100 Volts	200 Volts
C122B	200 Volts	200 Volts	300 Volts
C122C	300 Volts	300 Volts	400 Volts
C122D	400 Volts	400 Volts	500 Volts
C122E	500 Volts	500 Volts	600 Volts
C122M	600 Volts	600 Volts	700 Volts

Test	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Peak Off-state or Reverse Current (1)	I_{DRM} or I_{RRM}				mA	V_{DRM} = V_{RRM} = Max. allowable volts peak
		–	–	0.1		T_C = + 25°C
		–	–	0.5		T_C = +100°C
Peak-On-State Voltage	V_{TM}	–	–	1.83	Volts	T_C = +25°C, I_{TM} = 16A peak, 1 Millisecond wide pulse, Duty cycle ≤ 2%
Critical Rate of Rise of Off-State Voltage (Higher values may cause device switching)	dv/dt	10	50	–	Volts/μsec	T_C = +100°C, Rated V_{DRM} Gate Open Circuited, Linear Waveform
Circuit Commutated Turn-Off Time	t_q	–	50	–	μsec	T_C = +100°C, I_{TM} = 10 A peak, Rectangular current pulse, 40 μsec duration, Commutation rate = -5A/μsec, Peak reverse voltage = Rated volts max, Reverse voltage at end of turn-off time interval 12 volts min, Repetition rate = 60 pps, Rate of rise of re-applied off-stage voltage (dv/dt) = 10 V/μsec, Off-state voltage = Rated V, Gate bias during turn-off time interval = 0 volts, 100 ohms.
D.C. Gate Trigger Current	I_{GT}	–	–	25		T_C = +25°C, V_D = 6 Vdc, R_L = 91 ohms
		–	–	40	mAdc	T_C = -40°C, V_D = 6 Vdc, R_L = 45 Ohms
D.C. Gate Trigger Voltage	V_{GT}	–	–	1.5		T_C = +25°C, V_D = 6 Vdc, R_L = 91 Ohms
		–	–	2.0	Vdc	T_C = -40°C, V_D = 6 Vdc, R_L = 45 ohms
		0.2	–	–		T_C = +100°C, Rated V_{DRM}, R_L = 1000 ohms
Holding Current	I_H				mAdc	Anode source voltage = 24 Vdc, Peak initiating on-state current = 0.5 A, 0.1 msec to 10 msec wide pulse, Gate trigger source = 7V, 20 ohms
		–	–	30		T_C = +25°C
		–	–	60		T_C = -40°C
Latching Current	I_L				mAdc	Main Terminal Source Voltage = 24 Vdc, Gate trigger source = 15V, 100 ohms, 50 μsec rise and fall times max.
		–	–	60		T_C = +25°C
		–	–	120		T_C = -40°C
Steady-State (2) Thermal Resistance					°C/Watt	
	$R_{\theta JC}$	–	–	1.8		Junction to Case
	$R_{\theta JA}$	–	–	75		Junction to Ambient

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