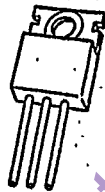


DIGITRON

092386

Reference No. SA01TY23



DGE
New at
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Triacs

6A to 15A RMS Up to 600 Volts
Isolated and Non-Isolated Tab

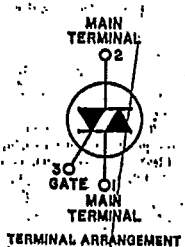
NY-04

ISOLATED TAB
SC140
SC142
SC147
NON-ISOLATED TAB
SC141
SC143
SC146
SC149
SC151

TYPE	RMS ON-STATE CURRENT, I _{T(RMS)} ⁽¹⁾ AMPERES	REPETITIVE PEAK OFF-STATE VOLTAGE, V _{DRM} ⁽²⁾				PEAK ONE FULL CYCLE SURGE (NON-REP) ON-STATE CURRENT, I _{TSM} AMPERES		I ² t FOR FUSING FOR TIMES AT ⁽³⁾	
		B VOLTS	D VOLTS	E VOLTS	M VOLTS	80 Hz	60 Hz	(RMS AMPERE) ² SECONDS 1.0 MILLISECOND	(RMS AMPERE) SECONDS, 8. MILLISECOND
						AMPERES	AMPERES		
ISOLATED TAB									
SC140	6.5	200	400	500	600	74	80	18	26.5
SC142	8	200	400	500	600	104	110	20	50
SC147	10	200	400	500	600	104	110	20	50
NON-ISOLATED TAB									
SC141	6	200	400	500	600	74	80	18	26.5
SC143	8	200	400	500	600	110	120	20	60
SC146	10	200	400	500	600	110	120	20	60
SC149	12	200	400	500	600	110	120	20	60
SC151	15	200	400	500	600	110	120	20	60

ISOLATED TAB SC140, 2, 7	NON-ISOLATED TAB SC141, 3, 6, 9, SC151
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CHARACTERISTICS



TEST	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Repetitive Peak Off-State Current	I _{DRM}			0.1	mA	V _{DRM} = Maximum Allowable Repetitive Off-State Voltage Rating Gate Open Circuited T _c = +25°C
				0.5		T _c = +100°C
Peak On-State Voltage	V _{TM}			1.85	Volts	T _c = +25°C, I _{TM} = 1 msec, Wide Pulse, Duty Cycle < 2%
SC140				1.85		I _{TM} = 9.2 A Peak
SC141				1.83		I _{TM} = 8.5 A Peak
SC142				1.75		I _{TM} = 11.5 A Peak
SC143				1.55		I _{TM} = 11.5 A Peak
SC146				1.65		I _{TM} = 14 A Peak
SC147				1.50		I _{TM} = 14 A Peak
SC149				1.65		I _{TM} = 17 A Peak
SC151				1.52		I _{TM} = 21 A Peak
Critical Rate-of-Rise of Off-State Voltage (Higher values may cause device switching)	dv/dt				Volts/μsec	T _c = +100°C, Rated V _{DRM} Gate Open Circuited Exponential Voltage Waveform
SC140, SC141		30	100			
SC142, SC143		50	150			
SC146, SC147		100	150			
SC149		100	200			
SC151		100	250			
Critical Rate-of-Rise of Commutating Off-State Voltage (Commutating dv/dt)	dv/dt(c)	4			Volts/μsec	I _{T(RMS)} = Rated Maximum Allowable RMS On-State Current, V _{DRM} = Maximum Rated Peak Off-State Voltage, Gate Open Circuited.
DC Gate Trigger Current	I _{GT}			50	mA	V _D = 12 Vdc TRIGGER MODE R _L T _c
				50		MT2+ Gate + 100 Ohms +25°C
				50		MT2- Gate - 100 Ohms
				50		MT2+ Gate - 50 Ohms
				80		MT2+ Gate + 50 Ohms
				80		MT2- Gate - 50 Ohms
				80		MT2+ Gate - 25 Ohms
DC Gate Trigger Voltage	V _{GT}			2.5	Vdc	V _D = 12 Vdc TRIGGER MODE R _L T _c
				2.5		MT2+ Gate + 100 Ohms +25°C
				2.5		MT2- Gate - 100 Ohms
				2.5		MT2+ Gate - 50 Ohms
				3.5		MT2+ Gate + 50 Ohms
				3.5		MT2- Gate - 50 Ohms
				3.5		MT2+ Gate - 25 Ohms
DC Gate Non-Trigger Voltage	V _{GD}	0.2			Vdc	TRIGGER MODE R _L T _c
						MT2+ Gate + 1000 Ohms +100°C
						MT2- Gate - Ohms
						MT2+ Gate + Ohms
						MT2- Gate + Ohms

ISOLATED TAB SC140, 2, 7	NON-ISOLATED TAB SC141, 3, 6, 9, SC151
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TEST	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
DC Holding Current	I _H			50	mA	Main Terminal Source Voltage = 24 Vdc Peak Initiating On-State Current = 0.1 milliseconds to 10 milliseconds wide pulse, Gate Trigger Source = 20 Ohms T _c = +25°C
				100		T _c = -40°C
DC Latching Current	I _L			100	mA	Main Terminal Source Voltage = 24 Vdc Gate Trigger Source = 15V, 100 Ohm, 50μsec pulse width, 5μsec rise and fall times maximum
				100		TRIGGER MODE T _c
				200		MT2 + Gate + +25°C
				200		MT2 - Gate -
				200		MT2 + Gate + -40°C
				200		MT2 - Gate -
				400		MT2 + Gate -
Steady State Thermal Resistance	R _{θJA}			75	°C/Watt	Junction-to-Ambient
Steady State Thermal Resistance	R _{θJC}				°C/Watt	Junction-to-Case This characteristic is useful as an acceptance test at an incoming inspection station.
SC140				3.1		
SC141				3.0		
SC142				3.3		
SC143				3.2		
SC146				2.2		
SC147				2.5		
SC149				2.0		
SC151				2.0		
Apparent Thermal Resistance	R _{θJC(appe)}				°C/Watt	Junction-to-Case This characteristic is useful in the calculation of junction temperature rise above case temperature for AC current conduction.
SC140				2.04		
SC141				2.22		
SC142				2.31		
SC143				1.97		
SC146				1.50		
SC147				1.69		
SC149				1.52		
SC151				1.10		