

SCR MODULE
SILICON DIFFUSED TYPE

MSG100(G,L,Q,U)41

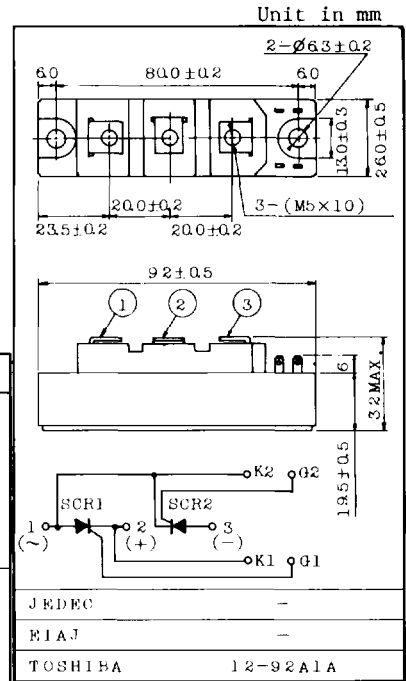
POWER CONTROL APPLICATIONS.

FEATURES:

- . Repetitive Peak Off-State Voltage : V_{DRM} } = 400 ~ 1600V
- . Repetitive Peak Reverse Voltage : V_{RRM}
- . Average On-State Current (Per SCR): $I_{T(AV)}=50A$
- . Critical Rate of Rise of Off-State Voltage : $dv/dt > 500V/\mu s$
- . Isolation Voltage : V_{ISOL} MSG100G41, MSG100L41 - 2000V AC
MSG100Q41, MSG100U41 - 2500V AC
- . Glass Passivation Chip

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	MSG100G41	400	V
	MSG100L41	800	
	MSG100Q41	1200	
	MSG100U41	1600	
Non-Repetitive Peak Reverse Voltage (Non-Repetitive < 5ms, $T_j=0 \sim 125^\circ C$)	MSG100G41	500	V
	MSG100L41	960	
	MSG100Q41	1440	
	MSG100U41	1750	
Average On-State Current (Half Sine Waveform $T_c=86^\circ C$)	$I_{T(AV)}$	50	A
R.M.S On-State Current	$I_{T(RSM)}$	79	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	1000(50Hz)	A
		1100(60Hz)	
I^2t Limit Value ($t=1 \sim 10ms$)	I^2t	5000	A^2s
Critical Rate of Rise of On-State Current (Note 1)	di/dt	100	A/ μs
Peak Gate Power Dissipation	P_{GM}	5	W
Average Gate Power Dissipation	$P_{G(AV)}$	0.5	W
Peak Reverse Gate Voltage	V_{RGM}	-5	V
Peak Forward Gate Current	I_{GM}	2	A
Junction Temperature	T_j	-40 ~ 125	$^\circ C$
Storage Temperature Range	T_{stg}	-40 ~ 125	$^\circ C$
Screw Torque (Note 2)	M5	20	kg·cm
	M6	30	



JEDEC	-
EIAJ	-
TOSHIBA	12-92A1A

Mounting Kit No. AC652 × 3
Weight : 170g

Note 1 : di/dt
Gate Supply: $t_{gr} \leq 250ns$
 $i_G \leq 200mA$
 $V_{DRM} = 0.5 \times \text{Rated}$

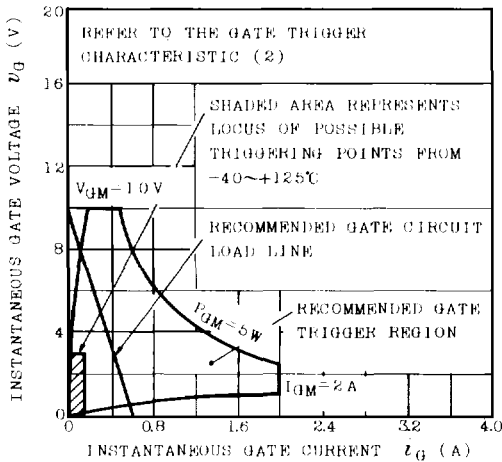
Note 2 : Recommended Torque
M5 : 16kg·cm
M6 : 24kg·cm

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ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	MAX.	UNIT	
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} I_{RRM}	$V_{DRM}=V_{RRM}=\text{Rated}$, $T_j=125^\circ\text{C}$	-	10	mA	
Peak On-State Voltage	V_{TM}	$I_{TM}=150\text{A}$	-	1.5	V	
Gate Trigger Voltage	V_{GT}	$V_D=6\text{V}$, $R_L=10\Omega$	-	1.5	V	
Gate Trigger Current	I_{GT}		-	80	mA	
Gate Non-Trigger Voltage	V_{GD}	$V_D=0.5 \times \text{Rated}$, $T_c=125^\circ\text{C}$	0.25	-	V	
Holding Current	I_H	$R_L=100\Omega$	-	150	mA	
Critical Rate of Rise of Off-State Voltage	dv/dt	$V_{DRM}=2/3 \times \text{Rated}$, $T_c=125^\circ\text{C}$ Exponential Rise	500	-	V/ μs	
Thermal Resistance	$R_{th(j-c)}$	Junction to Case	-	0.5	$^\circ\text{C}/\text{W}$	
Surge Isolation Voltage	V_{ISOL}	AC, $t=60\text{sec}$	MSG100G41 MSG100L41	2000	-	V
			MSG100Q41 MSG100U41	2500	-	

GATE TRIGGER CHARACTERISTIC (1)



GATE TRIGGER CHARACTERISTIC (2)

