

SCR MODULE
SILICON DIFFUSED TYPE

MSG100(G,L,Q,U)41

POWER CONTROL APPLICATIONS.

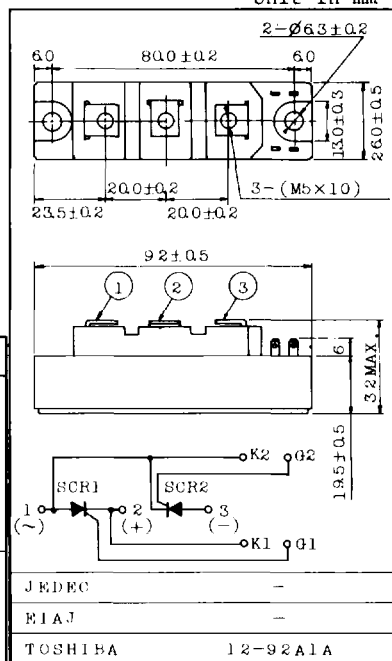
FEATURES:

- 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	$A/\mu s$
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	

Unit in mm



Mounting Kit No. AC652 × 3
Weight : 170g

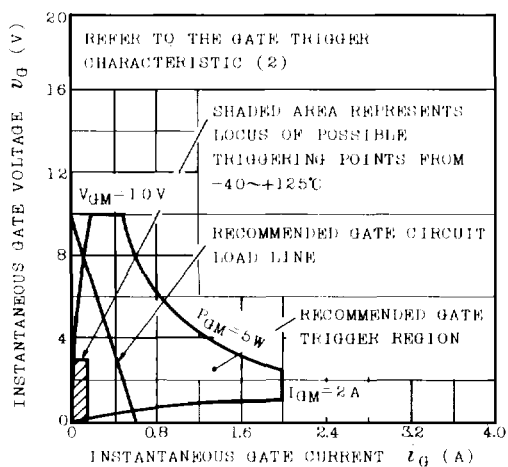
- Note 1 : di/dt
Gate Supply: $t_{gr} \leq 250ns$
 $i_G \leq 200mA$
 $V_{DRM} = 0.5 \times \text{Rated}$
- Note 2 : Recommended Torque
M5 : 16kg·cm
M6 : 24kg·cm

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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}	$V_{\text{DRM}}=V_{\text{RRM}}=\text{Rated}$, $T_{\text{j}}=125^{\circ}\text{C}$	-	10	mA	
Peak On-State Voltage	V_{TM}	$I_{\text{TM}}=150\text{A}$	-	1.5	V	
Gate Trigger Voltage	V_{GT}	$V_{\text{D}}=6\text{V}$, $R_{\text{L}}=10\Omega$	-	1.5	V	
Gate Trigger Current	I_{GT}		-	80	mA	
Gate Non-Trigger Voltage	V_{GD}	$V_{\text{D}}=0.5 \times \text{Rated}$, $T_{\text{c}}=125^{\circ}\text{C}$	0.25	-	V	
Holding Current	I_{H}	$R_{\text{L}}=100\Omega$	-	150	mA	
Critical Rate of Rise of Off-State Voltage	dv/dt	$V_{\text{DRM}}=2/3 \times \text{Rated}$, $T_{\text{c}}=125^{\circ}\text{C}$ Exponential Rise	500	-	V/ μs	
Thermal Resistance	$R_{\text{th(j-c)}}$	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)

