

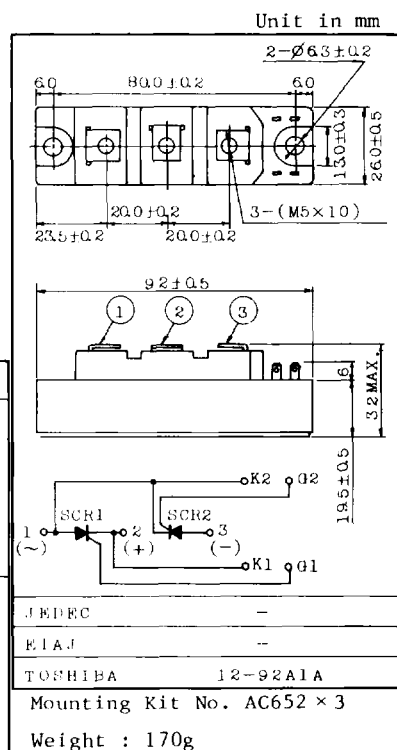
POWER CONTROL APPLICATIONS.

FEATURES:

- Repetitive Peak Off-State Voltage : V_{DRM} } = 400 ~ 1600V
- Repetitive Peak Reverse Voltage : V_{RRM}
- Average On-State Current (Per SCR) : $I_T(AV)$ = 30A
- Critical Rate of Rise of Off-State Voltage : dv/dt : 500V/ μ s
- Isolation Voltage : V_{ISOL} MSG60G41, MSG60L41 - 2000V AC
MSG60Q41, MSG60U41 - 2500V AC
- Glass Passivation Chip

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	MSG60G41	400	V
	MSG60L41	800	
	MSG60Q41	1200	
	MSG60U41	1600	
Non-Repetitive Peak Reverse Voltage (Non-Repetitive: 5ms, $T_j = 0 \sim 125^\circ\text{C}$)	MSG60G41	500	V
	MSG60L41	960	
	MSG60Q41	1440	
	MSG60U41	1750	
Average On-State Current (Half Sine Waveform $T_c = 84^\circ\text{C}$)	$I_T(AV)$	30	A
R.M.S On-State Current	$I_T(RMS)$	47	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	600(50Hz)	A
		660(60Hz)	
I^2t Limit Value ($t = 1 \sim 10\text{ms}$)	I^2t	1800	A ² s
Critical Rate of Rise of On-State Current (Note 1)	di/dt	100	A/ μ 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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40 ~ 125	$^\circ\text{C}$
Screw Torque (Note 2)	M5	20	kg·cm
	M6	30	



Note 1 : di/dt

Gate Supply: $t_{gr} \leq 250\text{ns}$
 $I_G \geq 200\text{mA}$
 $V_{DRM} = 0.5 \times \text{Rated}$

Note 2 : Recommended Torque

M5 : 16kg·cm
M6 : 24kg·cm

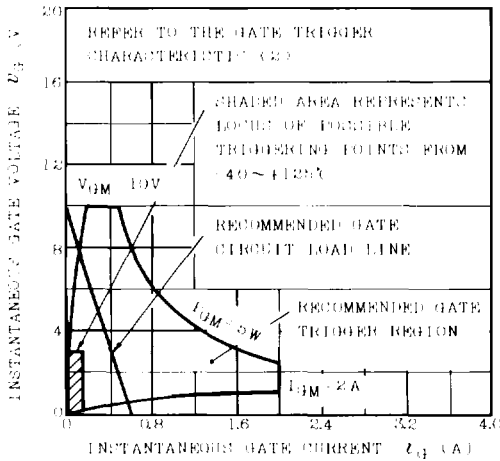
MSG60(G,L,Q,U)41

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}	$V_{DRM}=V_{RRM}=\text{Rated}$, $T_j=125^{\circ}\text{C}$	-	6	mA
Peak On-State Voltage	V_{TM}	$I_{TM}=100\text{A}$	-	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	$R_{L_c}=100\ \Omega$	-	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	-	0.8	$^{\circ}\text{C/W}$

Isolation Voltage	V_{ISOL}	AC, $t=60\text{sec}$	MSG60G41 MSG60L41	2000	-	V
			MSG60Q41 MSG60U41	2500	-	

GATE TRIGGER CHARACTERISTIC (1)



GATE TRIGGER CHARACTERISTIC (2)

