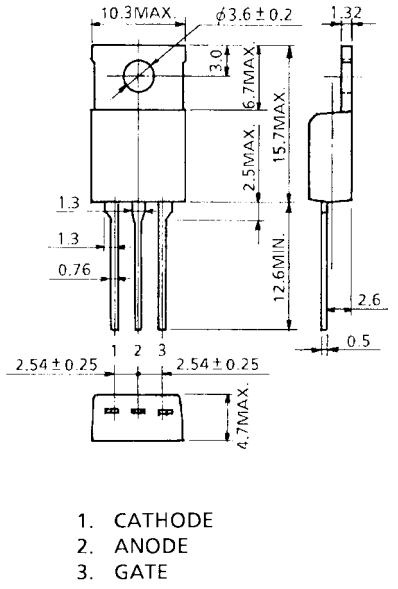
TOSHIBA HIGH-SPEED THYRISTOR SILICON PLANAR TYPE

SH8G41

FOR AUTOMATIC-STROBE FLASHER APPLICATIONS
−−− DISCHARGER (Chopper)

- Type No. SH8G41 is Designed for a Small Package Device Having ShortedTurn−Off Time and Low Turn−On Loss at High Current.
- Repetitive Peak Off-State Voltage and Peak Reverse Voltage : $V_{DRM} = V_{RRM} = 400V$
- Repetitive Peak Surge On−State Current : $I_{TRM} = 350A$
- Critical Rate of Rise of On−State Current : di/dt = 100A/μs
- Plastic Mold Package

Unit: mm



JEDEC	TO−220AB
JEITA	—
TOSHIBA	13−10G1B

Weight: 2.0g

MAXIMUM RATINGS

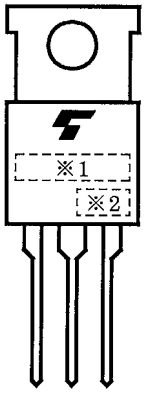
CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off−State and Reverse Voltage	V_{DRM} V_{RRM}	400	V
Non−Repetitive Peak Reverse Voltage (Note 1)	V_{RSM}	450	V
Repetitive Peak Surge On−State Current (Note 2)	I_{TRM}	350	A
Critical Rate of Rise of On−State Current (Note 3)	di /dt	100	A / μs
Peak Gate Power Dissipation	P_{GM}	5	W
Average Gate Power Dissipation	$P_{G\ (AV)}$	0.5	W
Peak Forward Gate Current	I_{GM}	2	A
Junction Temperature	T_j	−40~125	°C
Storage Temperature Range	T_{stg}	−40~125	°C

Note 1: Non − Rep. < 5ms, T_j = 0~125°C
Note 2: C_M = 1000μF
Note 3: i_G = 100mA
t_{gw} = 10μs
$t_{gr} \leq$ 250ns

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

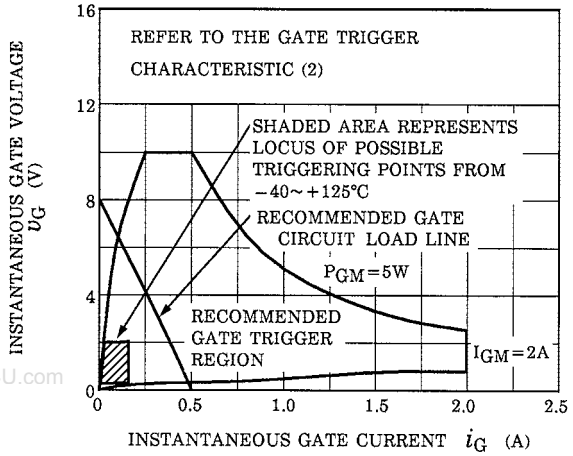
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Repetitive Peak Off−State and Reverse Current	I_{DRM} I_{RRM}	$V_{DRM} = V_{RRM} = 400V$	—	250	μA
Peak On−State Voltage	V_{TM}	$I_{TM} = 25A$	—	2.3	V
Gate Trigger Voltage	V_{GT}	$V_D = 6V$, $R_L = 10\Omega$	—	1.5	V
Gate Trigger Current	I_{GT}		—	50	mA
Gate Non−Trigger Voltage	V_{GD}	$V_D = 200V$, Ta = 125°C	0.2	—	V
Holding Current	I_H	$R_L = 100\Omega$	—	150	mA
Commutating Capacitor	C_c	$C_M = 1000\mu F$, $V_{CM} = 350V$, $I_{TM} = 230A$ $L_M = 50\mu H$, $V_{GR} = -6V$	—	2.7	μF
Thermal Resistance	$R_{th\ (j-a)}$	Junction to Ambient	—	90	°C / W

MARKING

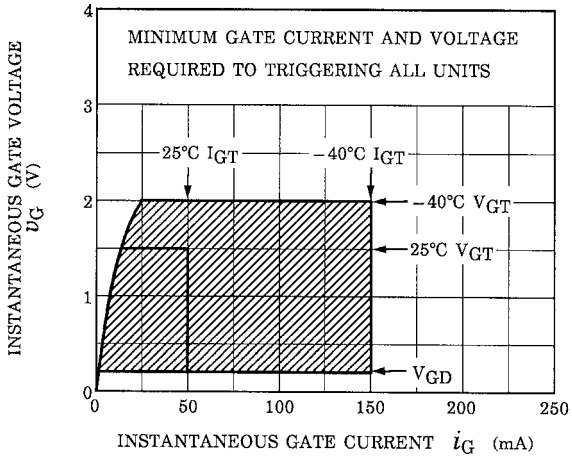


NUMBER	SYMBOL		MARK
*1	TYPE	SH8G41	SH8G41
*2	Lot Number Month (Starting from Alphabet A) Year (Last Decimal Digit of the Current Year)		Example 8A : January 1998 8B : February 1998 8L : December 1998

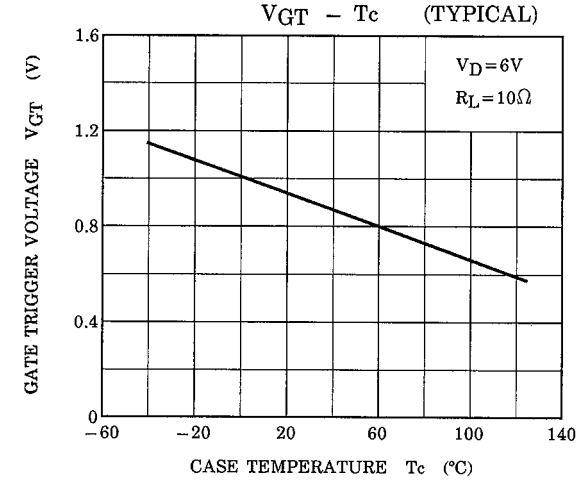
GATE TRIGGER CHARACTERISTIC (1)



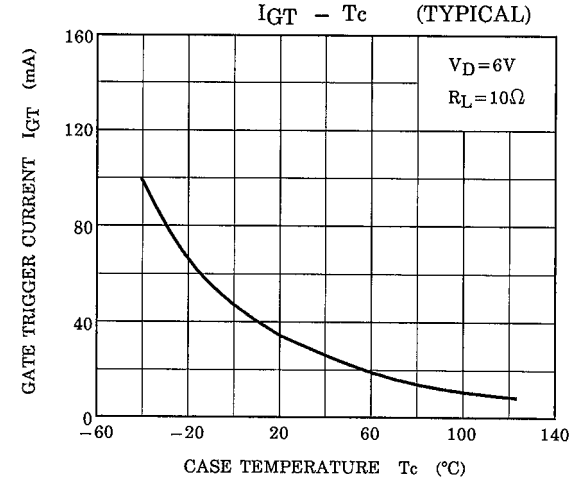
GATE TRIGGER CHARACTERISTIC (2)



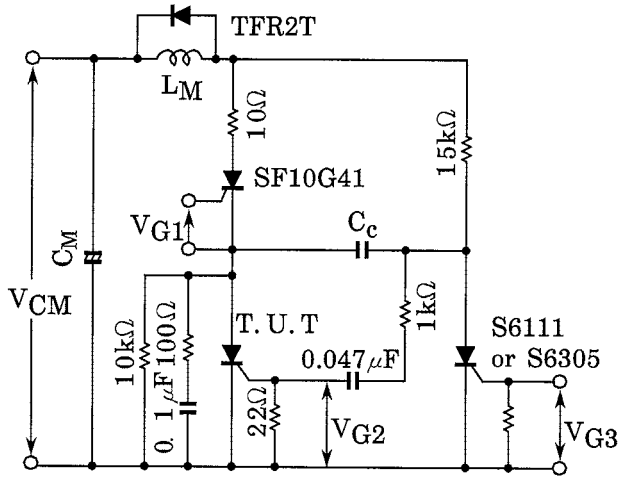
VGT − Tc (TYPICAL)

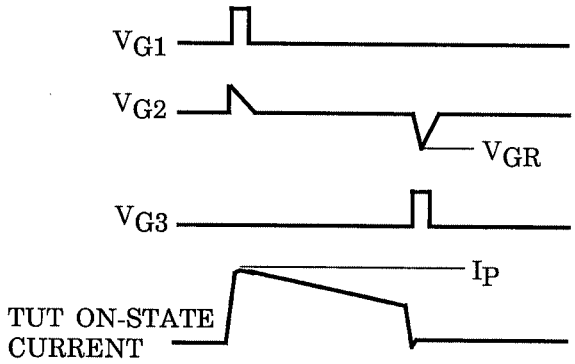


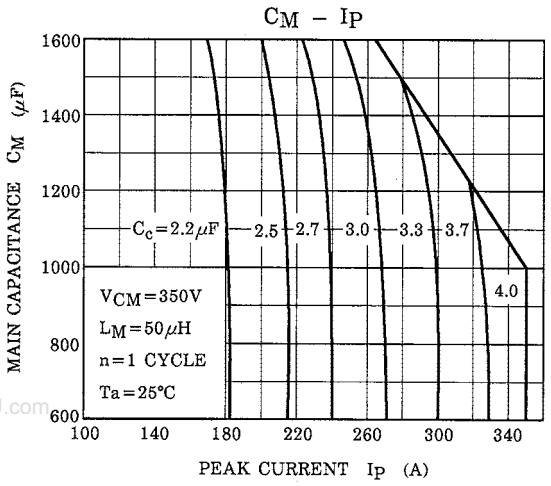
IGT − Tc (TYPICAL)

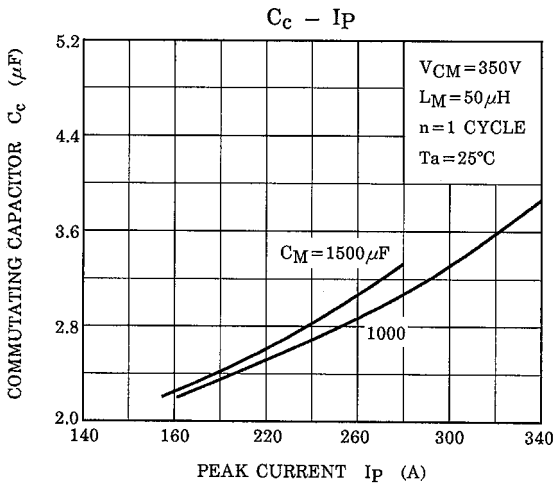


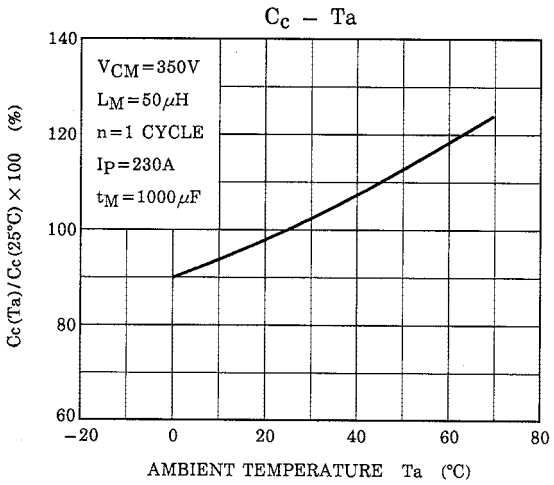
COMMUTATING CIRCUIT AND CONDITION

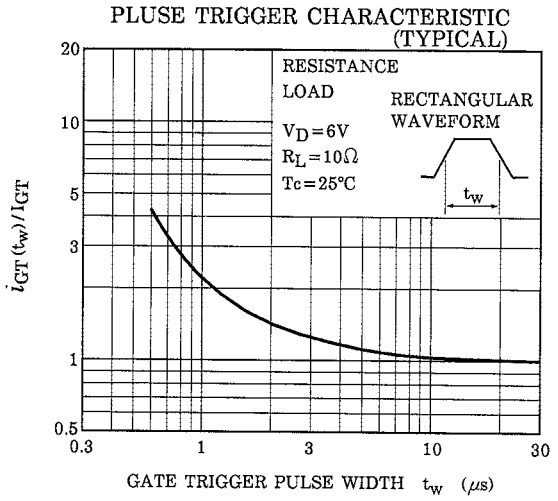












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