

BI-DIRECTIONAL TRIODE THYRISTOR  
SILICON PLANAR TYPE

# SM16(D,G)16

AC POWER CONTROL APPLICATIONS.

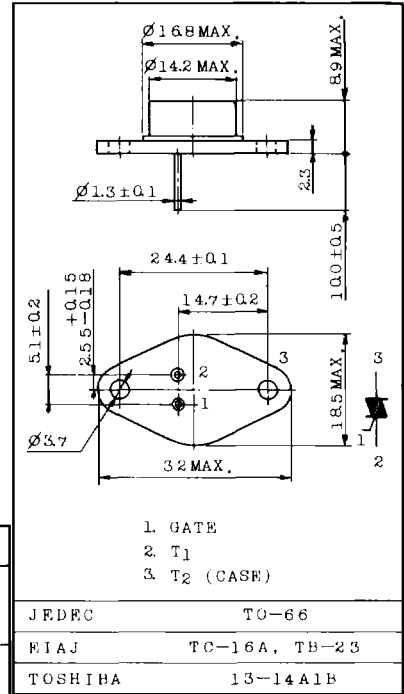
FEATURES:

- . Repetitive Peak Off-State Voltage :  $V_{DRM}=200\sim 400V$
- . R.M.S On-State Current :  $I_T(RMS)=16A$
- . Suitable for Heating Controls, Motor Controls, Dimmers and Power Switching System.

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage	SM16D16	200	V
	SM16G16	400	
R.M.S On-State Current (Full Sine Waveform $T_c=75^{\circ}C$ )	$I_T(RMS)$	16	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	$I_{TSM}$	130(50Hz)	A
		143(60Hz)	
$I^2t$ Limit Value ( $t=1\sim 10ms$ )	$I^2t$	84.5	$A^2s$
Peak Gate Power Dissipation	$P_{GM}$	5	W
Average Gate Power Dissipation	$P_{G(AV)}$	0.5	W
Peak Gate Voltage	$V_{GM}$	10	V
Peak Gate Current	$I_{GM}$	2	A
Junction Temperature	$T_j$	$-25\sim 125$	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	$-25\sim 125$	$^{\circ}C$

Unit in mm



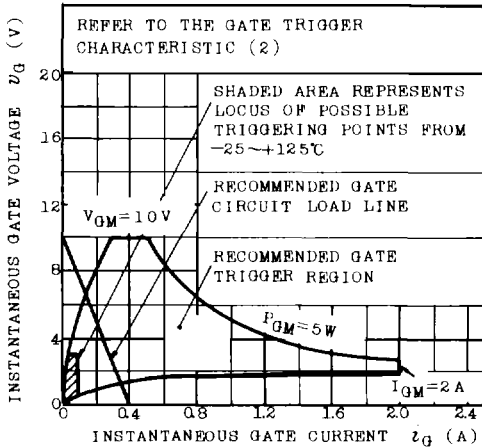
Mounting Kit No. AC20C  
Weight : 8g

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## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	MAX.	UNIT	
Repetitive Peak Off-State Current	$I_{DRM}$	$V_{DRM} = \text{Rated}, T_j = 125^\circ\text{C}$	-	3	mA	
Gate Trigger Voltage	I	$V_D = 12\text{V}, R_L = 20\Omega$	T2(+), Gate(+)	-	3	V
	III		T2(-), Gate(-)	-	3	
	IV		T2(+), Gate(-)	-	3	
Gate Trigger Current	I	$V_D = 12\text{V}, R_L = 20\Omega$	T2(+), Gate(+)	-	50	mA
	III		T2(-), Gate(-)	-	50	
	IV		T2(+), Gate(-)	-	50	
Peak On-State Voltage	$V_{TM}$	$I_{TM} = 25\text{A}$	-	1.5	V	
Gate Non-Trigger Voltage	$V_{GD}$	$V_D = \text{Rated}, T_c = 125^\circ\text{C}$	0.2	-	V	
Holding Current	$I_H$	$R_L = 100\Omega$	-	50	mA	
Thermal Resistance	$R_{th(j-c)}$	Junction to Case, AC	-	2.5	$^\circ\text{C/W}$	

GATE TRIGGER CHARACTERISTIC (1)



GATE TRIGGER CHARACTERISTIC (2)

