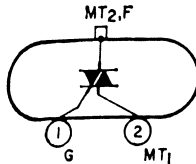


6A, 200V

40429

6A, 400V

40430



Si gate-controlled full-wave types used for the control of ac loads in applications such as heating controls, motor controls, light dimmers, and power switching systems. JEDEC TO-66,

MAXIMUM RATINGS (For sinusoidal ac supply voltage at $f = 50/60$ Hz with resistive or inductive load)

V_{DROM}^* ($T_J = -65^\circ\text{C}$ to 100°C)	40429 200	40430 400	V
$I_{T(RMS)}$ ($T_C = 75^\circ\text{C}$, conduction angle = 360°)	6		A
$I_{T(RMS)}$ (T_A up to 100°C , conduction angle = 360°)	See Rating Chart (Ambient Temperature)		
I_{TSM} (1 cycle of principal voltage)	100		A
I_{GTM} (1 μs max)	4		A
P_{GM} (1 μs max, $I_{GTM} \leq 4$ A peak)	16		W
$P_{G(AV)}$	0.2		W
T_{STG}	-65 to 150		$^\circ\text{C}$
T_C	-65 to 100		$^\circ\text{C}$

CHARACTERISTICS (At maximum electrical ratings at $T_C = 25^\circ\text{C}$)

I_{DROM}^* ($T_J = 100^\circ\text{C}$, $V_{DROM} = \text{max rated value}$)	0.1 typ; 4 max	0.2 typ; 4 max	mA
V_{TM}^* ($i_T = 30$ A peak)	1.8 typ; 2.25		V
I_{HO}^* (initial principal = 150 mA dc)	15 typ; 30 max		mA
Commutating dv/dt^* ($V_D = V_{DROM}$, $I_{T(RMS)} = 6$ A, commutating $di/dt = 3.2$ A/ms, gate unenergized at $T_C = 75^\circ\text{C}$)	3 min; 10 typ		V/ μs
Critical dv/dt^* ($V_D = V_{DROM}$, exponential voltage rise, $T_C = 100^\circ\text{C}$)	30 min; 150 typ	20 min; 100 max	V/ μs
$I_{GT}^{\dagger}$ ($V_D = 12$ Vdc, $R_L = 12 \Omega$):			
I+ mode, V_{MT2} positive, V_G positive	15 typ; 25 max		mA
I- mode, V_{MT2} positive, V_G negative	25 typ; 40 max		mA
III+ mode, V_{MT2} negative, V_G positive	25 typ; 40 max		mA
III- mode, V_{MT2} negative, V_G negative	15 typ; 40 max		mA
$V_{GT}^{\dagger}$ ($V_D = 12$ Vdc, $R_L = 12 \Omega$)	1 typ; 2.2 max		V
$V_{GT}^{\dagger}$ ($V_D = V_{DROM}$, $R_L = 125 \Omega$, $T_C = 100^\circ\text{C}$)	0.2 min		V
t_{gt} ($V_D = V_{DROM}$, $I_{GT} = 80$ mA, $t_r = 0.1 \mu\text{s}$, $i_T = 10$ A)	2.2		μs
θ_{J-C} (steady-state)	4 max		$^\circ\text{C}/\text{W}$
θ_{J-A}	See Rating Chart (Ambient Temperature)		

- * For either polarity of main terminal 2 voltage (V_{MT2}) with reference to main terminal 1.
- $\dagger$ For either polarity of gate voltage (V_G) with reference to main terminal 1.
- This characteristic does not apply to types 40502 and 40503.

