

TOSHIBA ALLOY-FREE LIGHT TRIGGER THYRISTOR

SL3500LX21

HIGH POWER CONTROL APPLICATIONS

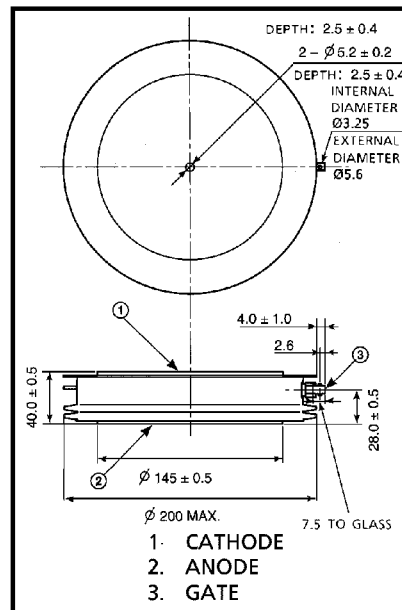
- Repetitive Peak Off-State Voltage : V_{DRM}
- Repetitive Peak Reverse Voltage : V_{RRM}
- Average On-State Current : $I_T(AV) = 3500A$
- Light Trigger Power : $P_{LT} : 8mW (Max.)$
- Turn-Off Time : $t_q = 400\mu s (Max.)$
- Critical Rate of Rise of On-State Current : $di / dt = 200A / \mu s$
- Critical Rate of Rise of Off-State Voltage : $dv / dt = 2300V / \mu s$
- Flat Package

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	V_{DRM}	8000	V
	V_{RRM}		
Non-Repetitive Peak Reverse Voltage (Non-Repetitive $\leq 5ms, T_j = 0 \sim 115^\circ C$)	V_{RSM}	8800	V
R.M.S On-State Current	$I_T(RMS)$	5498	A
Average On-State Current	$I_T(AV)$	3500	A
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	60000 (50Hz)	A
		65000 (60Hz)	
I^2t Limit Value	I^2t	180×10^5	A^2s
Critical Rate of Rise of On-State Current (Note)	di / dt	200	$A / \mu s$
Junction Temperature	T_j	$-40 \sim 120$	$^\circ C$
Storage Temperature Range	T_{stg}	$-40 \sim 120$	$^\circ C$
Mounting Force	—	98.0 ± 9.8	kN

Note : $V_D = 1/2$ Rated, $T_j = 120^\circ C$

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	13-200A1A

Weight : 6500g

961001EAA1

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ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I_{DRM} I_{RRM}	$V_{DRM} = V_{RRM} = \text{Rated}$, $T_j = 120^\circ\text{C}$	—	—	700	mA	
Peak On-State Voltage	V_{TM}	$I_{TM} = 2800\text{A}$, $T_j = 25^\circ\text{C}$	—	—	2.7	V	
Light Trigger Power	P_{LT}	$V_D = 12\text{V}$, $R_L = 6\Omega$	$T_j = -40^\circ\text{C}$	—	—	—	mW
			$T_j = 25^\circ\text{C}$	—	—	8	
Delay Time	t_d	$V_D = 1/2 \text{ Rated}$, $T_j = 25^\circ\text{C}$, $P_L = 24\text{mW}$	—	—	4	μs	
Gate Turn-On Time	t_{gt}		—	—	10	μs	
Turn-Off Time	t_q	$I_T = 2500\text{A}$, $V_R \geq 500\text{V}$, $dv/dt = 25\text{V}/\mu\text{s}$, $T_j = 90^\circ\text{C}$, $V_{DRM} = 1/2 \text{ Rated}$	—	—	400	μs	
Holding Current	I_H	$T_j = 25^\circ\text{C}$, $R_L = 6\Omega$	—	—	—	mA	
Critical Rate of Rise of Off-State Voltage	dv/dt	$V_{DRM} = 1/2 \text{ Rated}$, $T_j = 90^\circ\text{C}$, Gate Open, Exponential Rise	2300	—	—	$\text{V}/\mu\text{s}$	
Thermal Resistance (Junction to Case)	$R_{th(j-f)}$	DC	—	—	0.0035	$^\circ\text{C}/\text{W}$	