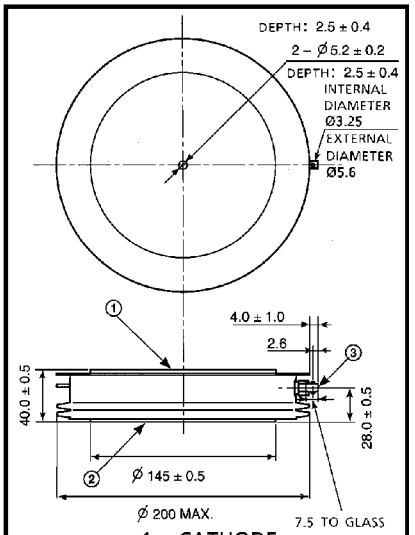
TOSHIBA ALLOY-FREE LIGHT TRIGGER THYRISTOR

SL3500LX21

HIGH POWER CONTROL APPLICATIONS

- Repetitive Peak Off-State Voltage : V_{DRM} } =8000V
- 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=400μs (Max.)
- Critical Rate of Rise of On-State Current : di / dt=200A / μs
- Critical Rate of Rise of Off-State Voltage : dv / dt=2300V / μs
- Flat Package

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	13-200A1A

Weight : 6500g

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	V_{DRM} V_{RRM}	8000	V
Non-Repetitive Peak Reverse Voltage (Non-Repetitive≦5ms, T_j=0~115°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) / 65000 (60Hz)	A
I^2t Limit Value	I^2t	180×10^5	A^2s
Critical Rate of Rise of On-State Current (Note)	di / dt	200	A / μs
Junction Temperature	T_j	−40~120	°C
Storage Temperature Range	T_{stg}	−40~120	°C
Mounting Force	—	98.0±9.8	kN

Note : V_D=1 / 2 Rated, T_j=120°C

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