TOSHIBA SL1500GX24

TOSHIBA ALLOY-FREE LIGHT TRIGGER THYRISTOR

SL1500GX24

HIGH POWER CONTROL APPLICATIONS

Repetitive Peak Off-State Voltage : V_{DRM} = 4000V

Repetitive Peak Reverse Voltage : VRRM

Average On-State Current $: I_{T(AV)} = 1500A$

Light Trigger Power : PLT: 10mW (Max.)

Turn-Off Time : $t_q = 400 \mu s$ (Max.)

Critical Rate of Rise of On-State Current

: $di/dt = 250A/\mu s$

Critical Rate of Rise of Off-State Voltage

: $dv/dt = 1500V/\mu s$

Flat Package

MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-State Voltage and Repetitive Peak Reverse Voltage	V _{DRM} V _{RRM}	4000	V
Non-Repetitive Peak Reverse Voltage (Non-Repetitive ≤ 5 ms, $T_j = 0 \sim 125$ °C)	v_{RSM}	4400	V
R.M.S On-State Current	I _T (RMS)	2355	Α
Average On-State Current	I _{T (AV)} 1500		Α
Peak One Cycle Surge On-State Current (Non-Repetitive)	I_{TSM}	30000 (50Hz) 33000 (60Hz)	Α
I ² t Limit Value	${ m I}^2{ m t}$	4500×10^{3}	A^2s
Critical Rate of Rise of On-State Current (Note)	di / dt	250	A/μs
Junction Temperature	$T_{ m j}$	-40~125	$^{\circ}\mathrm{C}$
Storage Temperature Range	$\mathrm{T_{stg}}$	-40~125	$^{\circ}\mathrm{C}$
Mounting Force		39.2±3.9	kN

Note: $V_D = 2000V$, f = 50Hz, $T_i = 120$ °C

DEFTH: 2.5 ± 0.4 INTERNAL J. DIAMETER Ø3.25 EXTERNAL DIAMETER Ø5.6
9 75±0.5 6.0±1.0
Ø 76±0.5 7.5 TO GLASS
1· CATHODE 2. ANODE 3. GATE
JEDEC —
TOTA T

Unit in mm

EIAJ TOSHIBA 13-120L1A

Weight: 1700g

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ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	MAX.	UNIT
Repetitive Peak Off-State Current and Repetitive Peak Reverse Current	I _{DRM} I _{RRM}	$V_{ m DRM} = V_{ m RRM} = 4000 V$ $T_{ m j} = 125 ^{\circ} { m C}$	_	120	mA
Peak On-State Voltage	$V_{ extbf{TM}}$	$I_{TM} = 5000A, T_j = 25$ °C	_	2.3	V
Light Trigger Power	$P_{ m LT}$	$V_D = 12V, R_L = 6\Omega$ $T_j = -40^{\circ}C$	_	_	mW
		$VD^{-12}V, KL^{-612}$ $T_j=25$ °C	_	10	111 44
Delay Time	$\mathrm{t_{d}}$	$V_D = 2000V, T_j = 25^{\circ}C$		4	μ s
Gate Turn-On Time	t_{gt}	P_L =20mW		6	μ s
Turn-Off Time	t_{q}	$egin{array}{ll} I_{T}\!=\!1200A, \ V_{R}\!\!\geq\!200V \\ dv/dt\!=\!25V/\mu s, \ T_{j}\!=\!115^{\circ}\!C \\ V_{DRM}\!=\!2000V \end{array}$		400	μs
Holding Current	${ m I_H}$	$T_j=25$ °C, $R_L=6\Omega$		300	mA
Critical Rate of Rise of Off-State Voltage	dv / dt	V _{DRM} =2000V, T _j =125°C Gate Open, Exponential Rise			V / μs
Thermal Resistance (Junction to Case)	$ m R_{th~(j-f)}$	DC		0.02	°C/W









