

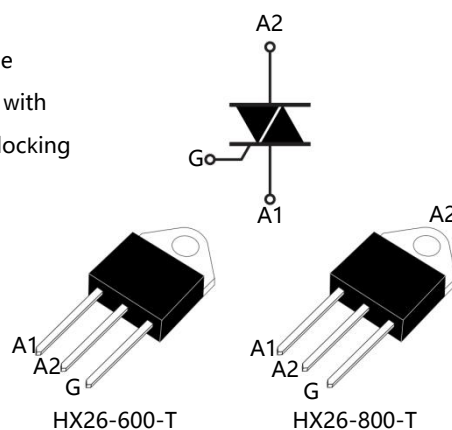
HX26-600-T/HX26-800-T bidirectional thyristor

Trait

The NPNPN five-layer silicon bidirectional device adopts single-side grooving process and countertop glass blunt process, and is equipped with multi-layer metal electrodes on the back. This device offers excellent blocking voltage and temperature stability for high reliability.

Apply

- Vacuum cleaners, power tools and other motor speed control
- Switching Mode Power Supply
- Heating controller (temperature control)
- Other phase controlled circuits
- Solid-state relay



Limit Parameter					
Symbol	Parameter Name			Numerical Value	Unit
$I_{T(RMS)}$	On-state square root current	HX26-600-T	$T_c=80^{\circ}C$	26	A
		HX26-800-T	$T_c=90^{\circ}C$		
I_{TSM}	On-state surge current	F=50HZ	t=20ms	260	A
I^2t	The limit value of I^2t	$t_p=10ms$		340	A^2S
di/dt	Critical rise rate of on-state current		$T_j=125^{\circ}C$	50	A/us
V_{DRM}/V_{RRM}	Off state repetitive peak voltage/ reverse repetitive peak voltage		$T_j=25^{\circ}C$	800/1000	V
I_{GM}	Peak gate current	$t_p=20us$	$T_j=125^{\circ}C$	4	A
$P_{G(AV)}$	Average gate dissipated power		$T_j=125^{\circ}C$	1	W
T_{stg}	Storage temperature			-40to+150	$^{\circ}C$
T_j	Effective junction temperature			-40to+125	

Static Parameters					
Symbol	Name and Testing Conditions			Numerical Value	Unit
V_{TM}	On state peak voltage $I_{TM}=82A$	$T_j=25^{\circ}C$	MAX	1.50	V
V_{T0}	Threshold voltage	$T_j=125^{\circ}C$	MAX	0.85	V
R_d	slope resistance	$T_j=125^{\circ}C$	MAX	9.2	$m\Omega$
I_{DRM}	Off state peak current	$T_j=25^{\circ}C$	MAX	10	μA
I_{RRM}	Reverse peak current	$T_j=125^{\circ}C$		2	mA
$R_{th(j-c)}$	junction-to-case thermal resistance	HX26-600-T		0.9	$^{\circ}C/W$
		HX26-800-T		0.6	

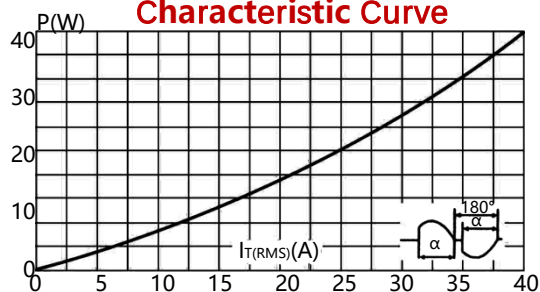
Electrical characteristics (three quadrants)

Symbol	Name and testing conditions	Quadrant		numerical value	Unit
I_{GT}	trigger current $V_D = 12V$ $R_L = 100\Omega$	I II III	MAX	≤ 50	mA
V_{GT}	trigger voltage		MAX	1.5	V
V_{GD}	Do not trigger voltage $T_j = 125^\circ C$		MIN	0.2	V
I_H	holding current $I_T = 0.5A$		MAX	60	mA
I_L	latching current $I_G = 1.2I_{GT}$		MAX	60	mA
				100	
dv/dt	Critical rise rate of off state voltage $V_D = 2/3V_{DRM}$ $T_j = 125^\circ C$		MIN	500	V/us
$(dv/dt)_c$	Critical rise rate of commutation voltage $T_j = 125^\circ C$		MIN	10	V/us

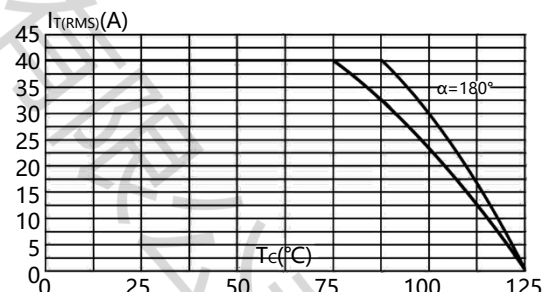
Electrical characteristics (four quadrants)

IGT	trigger current VD= 12V RL= 100Ω	I II III IV	MAX	I II III ≤50	IV ≤120	mA
VGT	trigger voltage		MAX	1.5		V
VGD	Do not trigger voltage Tj=125°C		MIN	0.2		V
IH	holding current IT=0.5A		MAX	60		mA
IL	latching current IG= 1.2IGT		MAX	60	100	mA
dv/dt	Critical rise rate of off state voltage VD=2/3VDRM Tj=125°C		MIN	500		V/us
(dv/dt)c	Critical rise rate of commutation voltage Tj=125°C		MIN	10		V/us

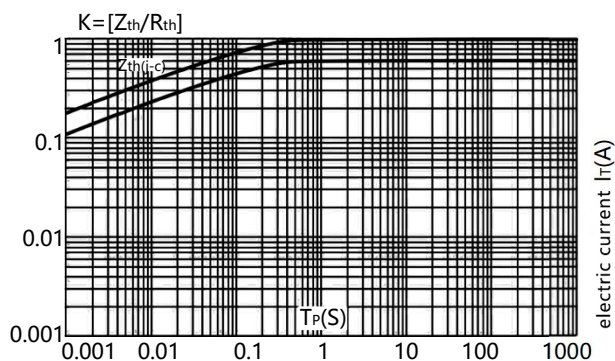
Characteristic Curve



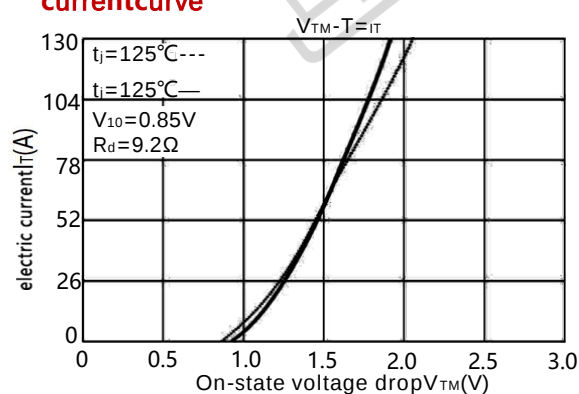
Power consumption and current curve (180 %)



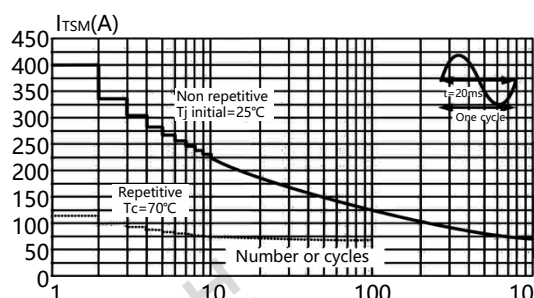
Shell temperature and on state root mean square current curve



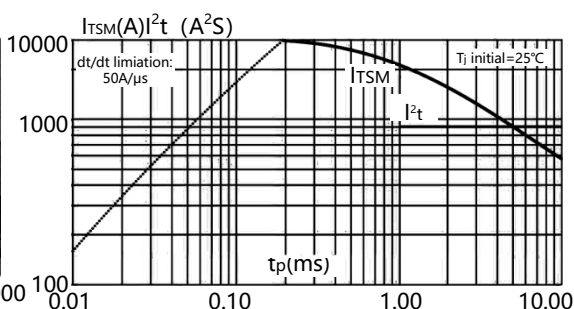
Transient Thermal Resistance Curve



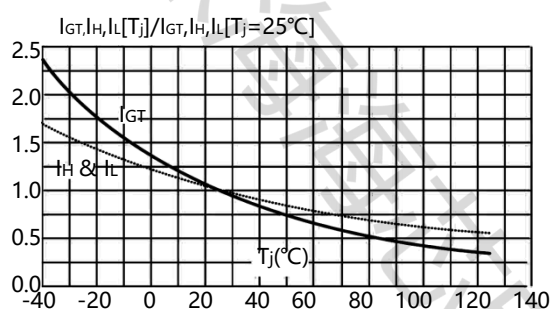
On state volt ampere characteristic curve



Surge current versus frequency curve



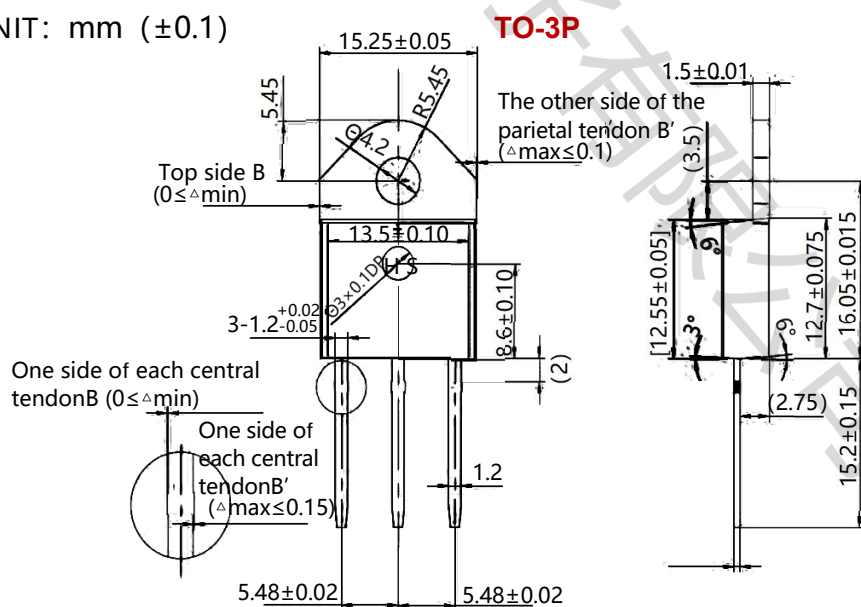
$I_{TSM}-t, I^2t-t$ curve



Gate trigger characteristic curve

Outline dimension diagram

UNIT: mm (± 0.1)



Part Model	Encapsulation	Type	Packaging method	Number
HX26-600-T	TO-3P	Insulation type	Tube Pack	500
HX26-800-T	TO-3P	Non insulated type	Tube Pack	500