

DESCRIPTION:

With high ability to withstand the shock loading of large current, TYN1625C SCR provides high dV/dt rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. Package TO-220C is RoHS compliant.

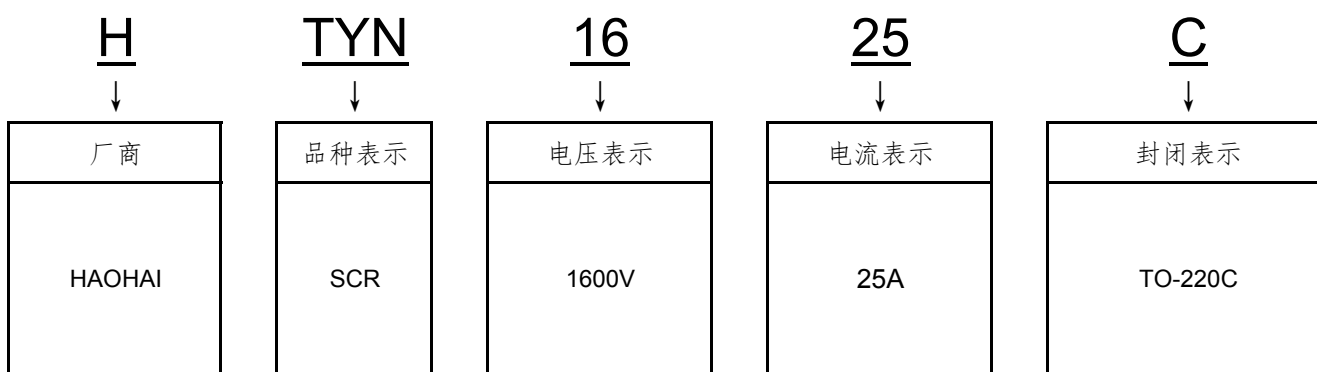
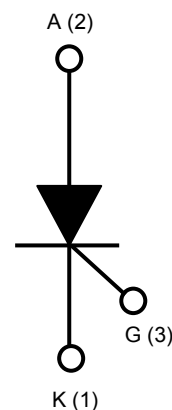
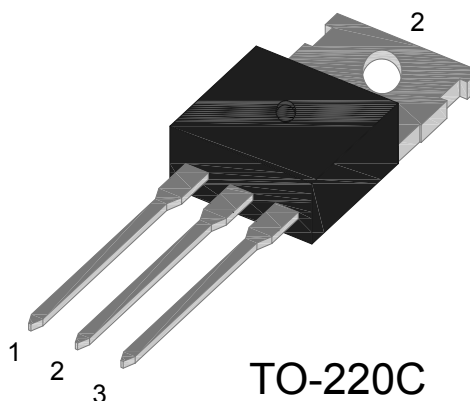
Product Model Reference & Naming

25A	产品型号列表、对应封装、型号对照电压值					I _{GT}
	封装标识	600V	800V	1200V	1600V	
TO-220C	C	TYN625C	TYN825C	TYN1225C	TYN1625C	≤40mA
Remarks		标准品种	高压品种	特制高压	特制高压	

PINNING: Insulated Package

Pin in Symbol and Description			
1	K	Cathode	阴极
2	A	Anode	阳极
3	G	Gate	门-控制极
4		Tab	散热片

Pin Polarity Diagram
脚位与极性 电路符号表示



■ ABSOLUTE RATINGS (Limiting Values)

SYMBOL	Parameter & Test Conditions		Value	Unit
$I_{T(RMS)}$	RMS on-state current	$T_C \leq 85^\circ\text{C}$	25	A
I_{TSM}	Non repetitive surge peak on-state current	$t_p=10\text{ms}, T_J=25^\circ\text{C}$	280	
		$t_p=8.3\text{ms}, T_J=25^\circ\text{C}$	300	
$I_{T(AV)}$	Average on-state current	$T_C \leq 85^\circ\text{C}$	16	
I_{GM}	Peak gate current	$t_p=20\mu\text{s}, T_J=125^\circ\text{C}$	5	
I^2t	I^2t value for fusing	$t_p=10\text{ms}, T_J=25^\circ\text{C}$	392	A^2s
P_{GM}	Peak gate power	$T_J=125^\circ\text{C}$	20	W
$P_{G(AV)}$	Average gate power dissipation	$T_J=125^\circ\text{C}$	1	
V_{DRM}	Repetitive peak off-state voltage	$T_J=25^\circ\text{C}$	1600	V
V_{RRM}	Repetitive peak reverse voltage	$T_J=25^\circ\text{C}$		
di/dt	Critical rate of rise of on-state current	$I_G=2 \times I_{GT}, f=100\text{Hz}, T_J=125^\circ\text{C}$	200	$\text{A}/\mu\text{s}$
V_{PP}	Peak pulse voltage ($T_J=25^\circ\text{C}$, non-repetitive, off-state, FIG.7)		1.5	kV
T_J	Operating Junction Temperature Range		-40~+125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range		-40~+150	

■ ELECTRICAL CHARACTERISTICS ($T_J=25^\circ\text{C}$ Unless Otherwise Noted)

SYMBOL	Parameter & Test Conditions	Min	Typ	Max	Unit
I_{GT}	$V_D=12\text{V}, R_L=33\Omega$	--	--	40	mA
I_H	Holding Current ($I_T=500\text{mA}$)	--	--	90	
I_L	$I_G=1.2 I_{GT}$	--	--	100	
V_{GT}	$V_D=12\text{V}, R_L=33\Omega$	--	--	1	V
V_{GD}	$V_D=V_{DRM}, T_J=125^\circ\text{C}, R_L=3.3\text{K}\Omega$	0.2	--	--	
dV/dt	$V_D=2/3 V_{DRM}$, Gate Open $T_J=125^\circ\text{C}$	1000	--	--	$\text{V}/\mu\text{s}$
t_{on}	$I_G=50\text{mA}, I_A=500\text{mA}, I_R=50\text{mA}, T_J=25^\circ\text{C}$	--	7	--	μs
t_{off}		--	100	--	

■ STATIC CHARACTERISTICS

SYMBOL	Parameter & Test Conditions	Max	Unit
V_{TM}	$I_{TM}=50\text{A}, t_p=380\mu\text{s}$	$T_J=25^\circ\text{C}$ 1.8	V
V_{TO}	Threshold voltage	$T_J=125^\circ\text{C}$ 0.74	
R_D	Dynamic resistance	$T_J=125^\circ\text{C}$ 27	$\text{m}\Omega$
I_{DRM}	$V_D=V_{DRM}, V_R=V_{RRM}$	$T_J=25^\circ\text{C}$ 10	μA
I_{RRM}	$V_D=V_{DRM}, V_R=V_{RRM}$	$T_J=125^\circ\text{C}$ 4	mA

■ THERMAL RESISTANCES

SYMBOL	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to case (DC)	1.1	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	Junction to ambient (DC)	55	

Voltage Current Characteristic of SCR

FIG-1: Maximum power dissipation versus RMS on-state current

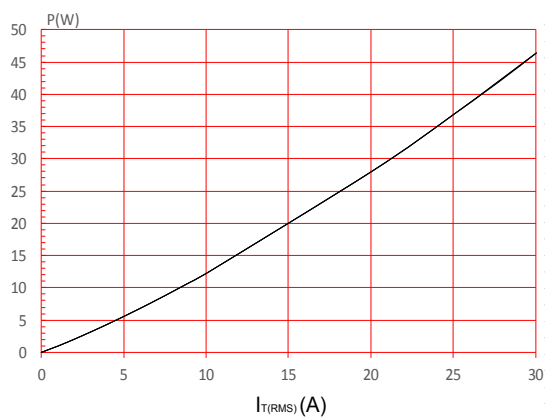


FIG-2: RMS on-state current versus case temperature

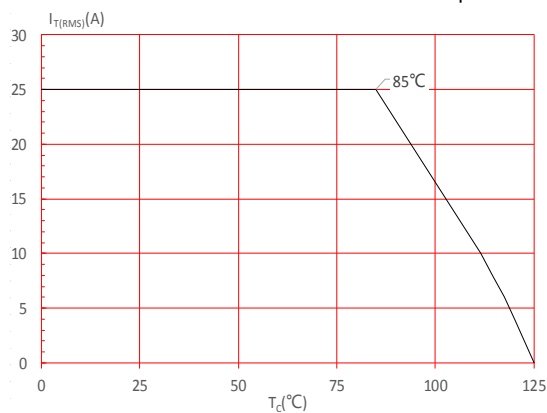


FIG-3: Surge peak on-state current versus number of cycles

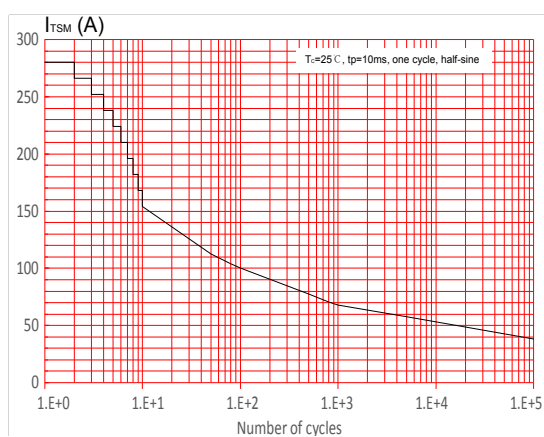


FIG-4: On-state characteristics

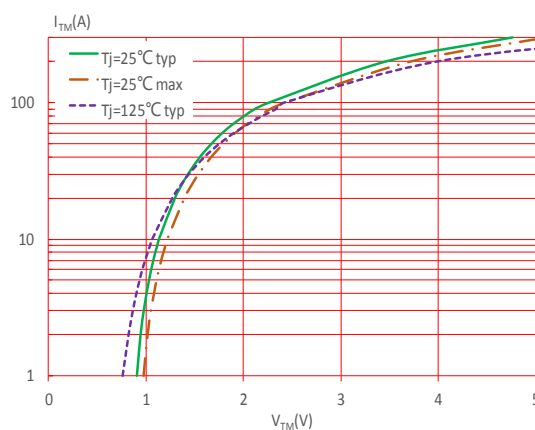


FIG-5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$, and corresponding value of $I^2t (dl/dt < 200A/\mu s)$

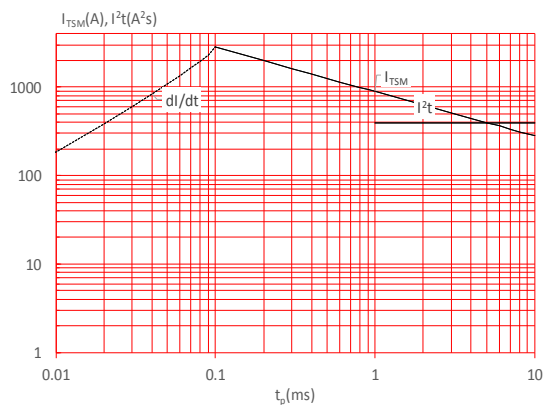


FIG-6: Relative variations of gate trigger current, holding current and latching current versus junction temperature

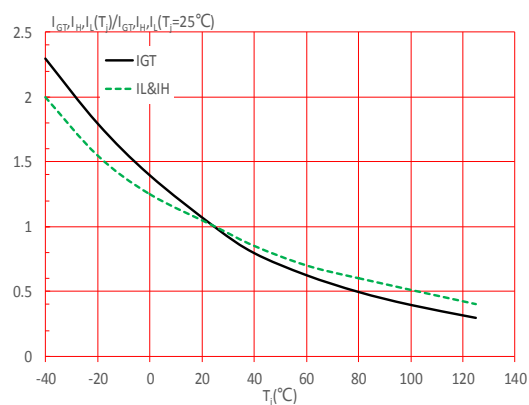
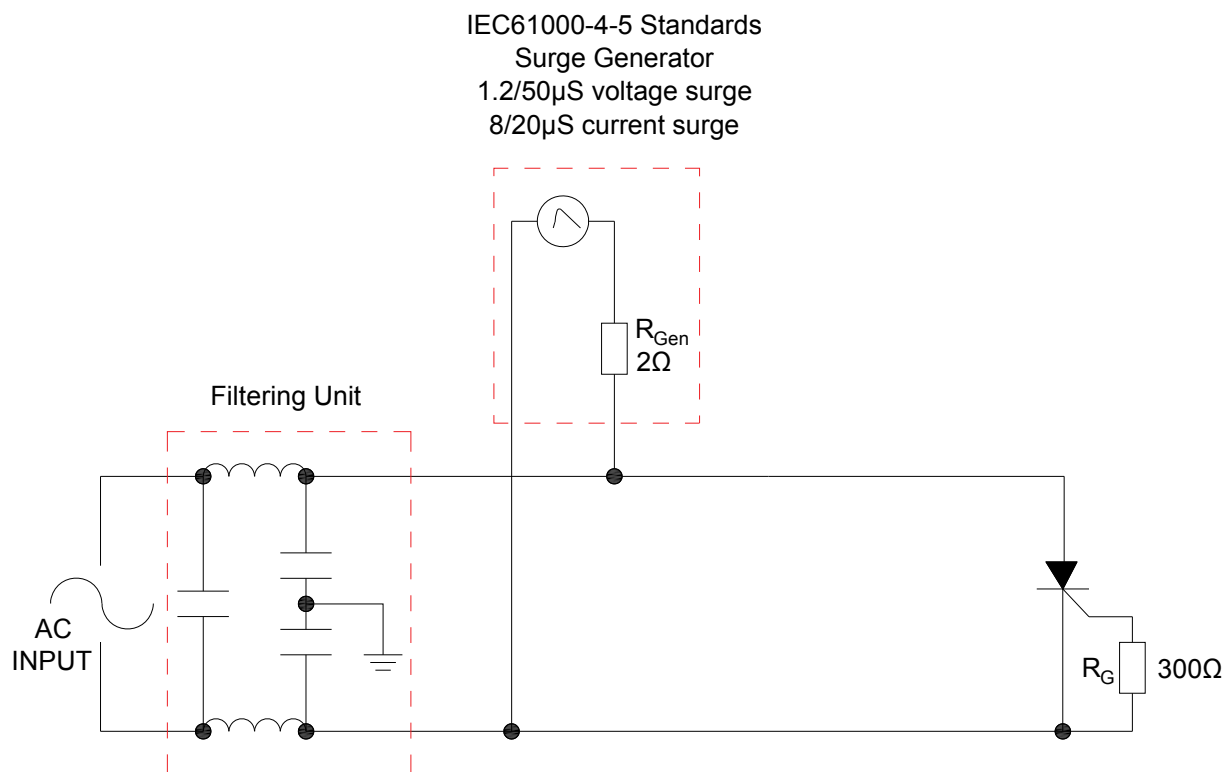
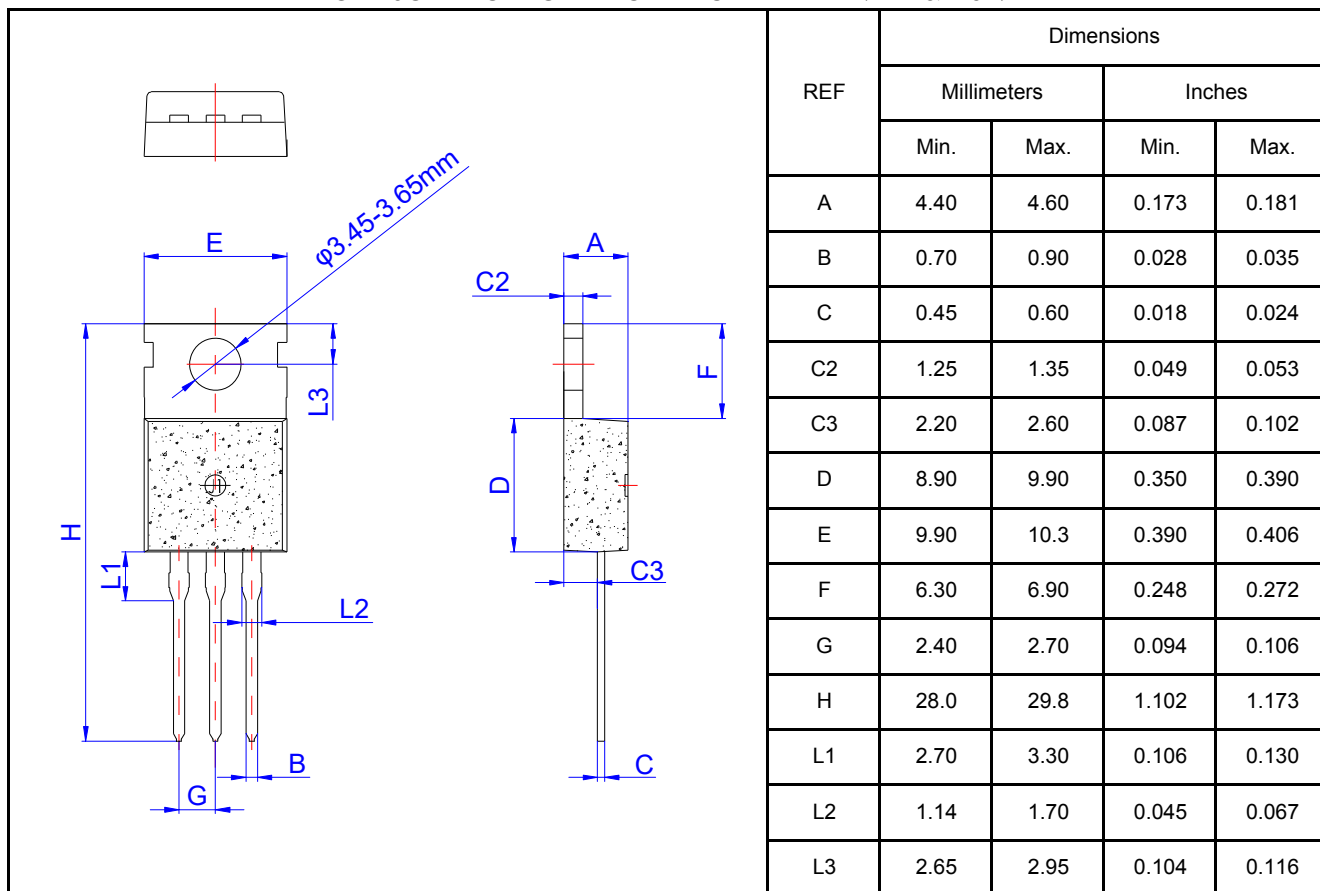


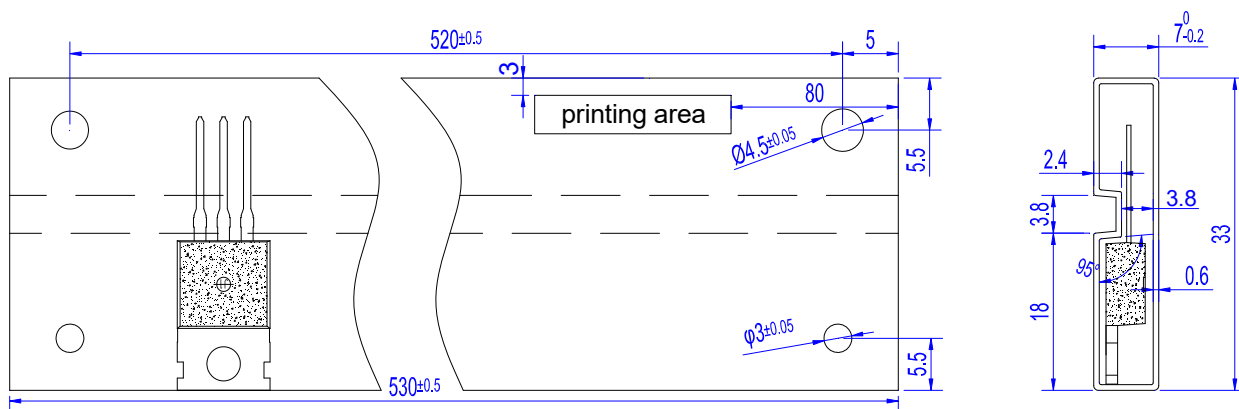
FIG.7: Test circuit for inductive and resistive loads to IEC-61000-4-5 standards.



TO-220C PACKAGE MECHANICAL DATA (mm & inch)



DELIVERY MODE



■ Packaging Specifications

PACKAGE	OUTLINE	REF.	Tube.	BOX	Carton
TO-220C	TUBE	QTY	50 Pcs	1,000 Pcs	5,000 Pcs



WARN, Letters, patterns, are officially registered my trademark counterfeiting theft are all violations, violators will be held liable!

深圳市浩海电子有限公司

SHENZHEN HAOHAI ELECTRONICS CO., LTD.

TEL: +86-755-29955080、29955081、29955082、29955083

FAX: +86-755-27801767

E-mail: kkg@kkg.com.cn

产品主页: <http://www.szhhe.com>

<http://www.kkg.com.cn>