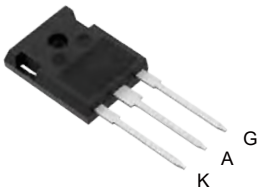
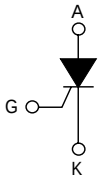
STYN1055

Discrete Thyristors(SCRs)

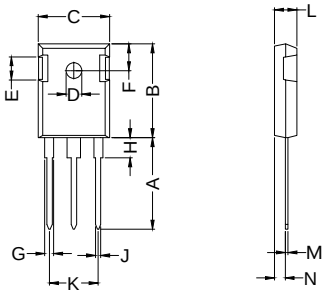




K=Cathode, A=Anode, G=Cate

	V_{RRM} V	V_{RSM} V
STYN1055	1000	1100

Dimensions TO-247AD



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.620	0.640
ØD	3.15	3.65	0.124	0.144
E	4.32	5.49	0.170	0.216
F	5.40	6.30	0.213	0.248
G	1.65	2.18	0.065	0.086
H	3.80	4.50	0.150	0.177
J	1.00	1.40	0.039	0.055
K	10.80	11.10	0.425	0.437
L	4.70	5.30	0.185	0.209
M	0.40	0.80	0.016	0.031
N	1.50	2.49	0.059	0.098

Symbol	Test Conditions		Maximum Ratings	Unit
I_{TRMS} I_{TAVM}	$T_{VJ}=T_{VJM}$ $T_C=85^oC$; 180° sine		55 35	A
I_{TSM}	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	300 320	A
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	270 290	
i^2t	$T_{VJ}=45^oC$ $V_R=0$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	450 440	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	365 355	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ f=50Hz, t_p=200us $V_D=2/3V_{DRM}$ I_G=0.3A di_G/dt=0.3A/us	repetitive, I_T=40A non repetitive, $I_T=I_{TAVM}$	150 500	A/us
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $R_{GK}=\infty$; method 1 (linear voltage rise)	$V_{DR}=2/3V_{DRM}$	1000	V/us
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$	t_p=30us t_p=300us	10 5	W
P_{GAV}			0.5	W
V_{RGM}			10	V
T_{VJ} T_{VJM} T_{stg}			-40...+125 125 -40...+125	°C
M_d F_c	Mounting torque (M3) Mounting force with clip		0.8...1.2 20...120	Nm N
Weight	typical		6	g

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com

STYN1055

Discrete Thyristors(SCRs)

Symbol	Test Conditions	Characteristic Values	Unit
I_R, I_D	$T_{VJ}=T_{VJM}$; $V_R=V_{RRM}$; $V_D=V_{DRM}$	5	mA
V_T	I_T=55A; T_{VJ}=25°C	1.6	V
V_{TO}	For power-loss calculations only (T_{VJ}=125°C)	0.9	V
r_T		15	mΩ
V_{GT}	V_D=6V; T_{VJ}=25°C T_{VJ}=-40°C	1.0 1.2	V
I_{GT}	V_D=6V; T_{VJ}=25°C T_{VJ}=-40°C T_{VJ}=125°C	65 80 50	mA
V_{GD}	$T_{VJ}=T_{VJM}$; $V_D=2/3V_{DRM}$	0.2	V
I_{GD}		5	mA
I_L	T_{VJ}=25°C; t_p=10us; I_G=0.3A; di_G/dt=0.3A/us	150	mA
I_H	T_{VJ}=25°C; V_D=6V; R_{GK}=∞	100	mA
t_{gd}	T_{VJ}=25°C; V_D=1/2V_{DRM} I_G=0.3A; di_G/dt=0.3A/us	2	us
R_{thJC}	DC current	0.62	K/W
R_{thJH}	DC current	0.82	K/W
a	Max. acceleration, 50 Hz	50	m/s^2

Features / Advantages:
- Thyristor for line frequency
- Glass passivated chip
- Long-term stability

Applications:
- Line rectifying 50/60 Hz
- Softstart AC motor control
- DC Motor control
- Power converter
- AC power control
- Lighting and temperature control

Package:
- TO-247AD
- Industry standard outline
- RoHS compliant
- Epoxy meets UL 94V-0

ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
STYN1055	TO-247AD	30pcs / Tube	STYN1055

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com

STYN1055

Discrete Thyristors(SCRs)

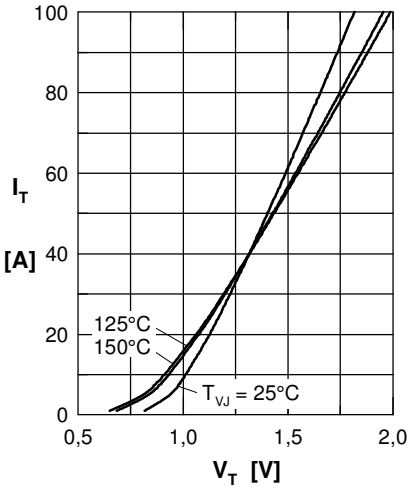


Fig. 1 Forward characteristics

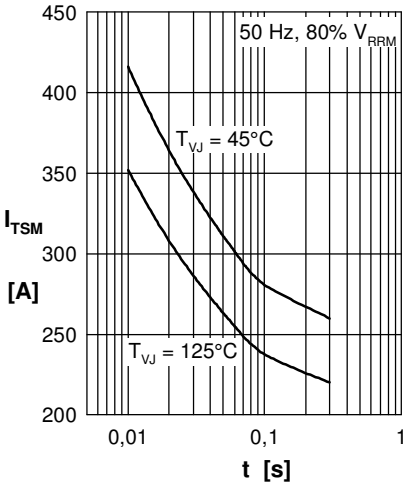


Fig. 2 Surge overload current

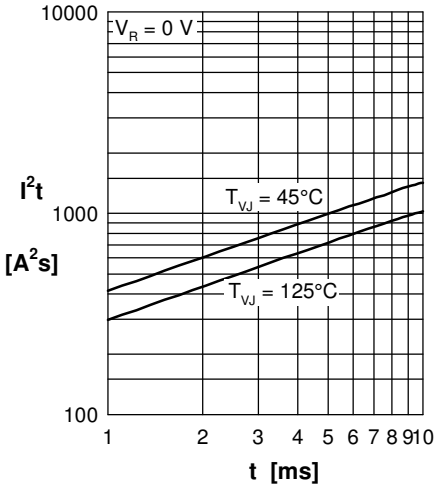


Fig. 3 I^2t versus time (1-10 ms)

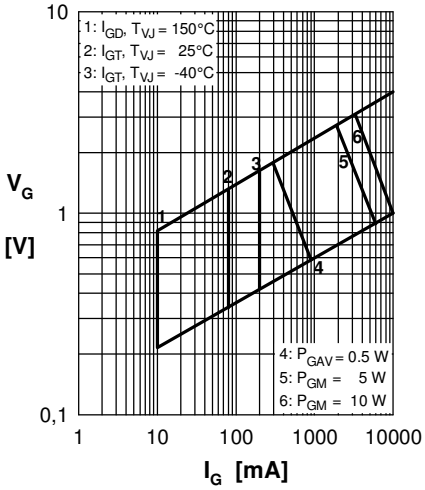


Fig. 4 Gate trigger characteristics

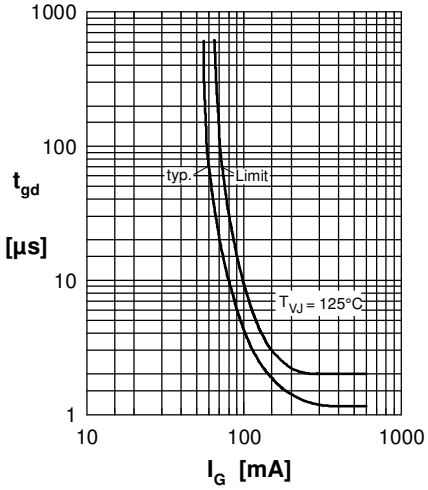


Fig. 5 Gate controlled delay time

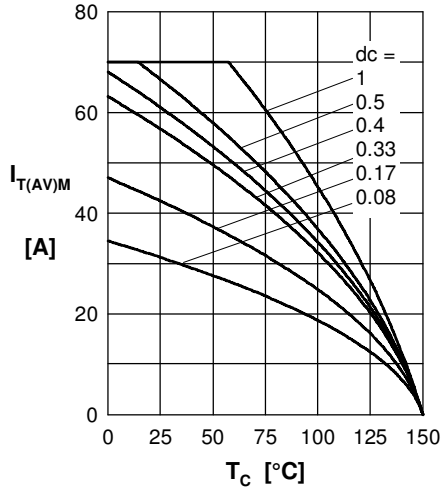
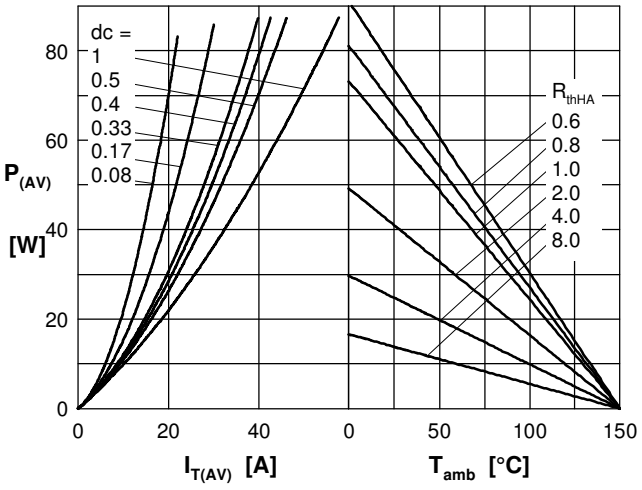


Fig. 6 Max. forward current at case temperature



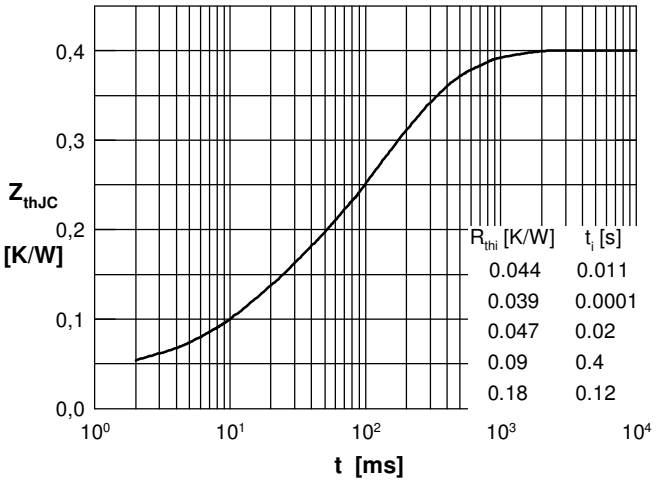


Fig. 7a Power dissipation versus direct output current
Fig. 7b and ambient temperature

Fig. 8 Transient thermal impedance junction to case

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com