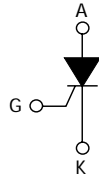
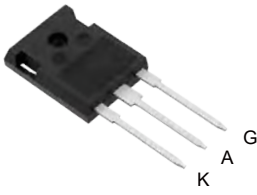


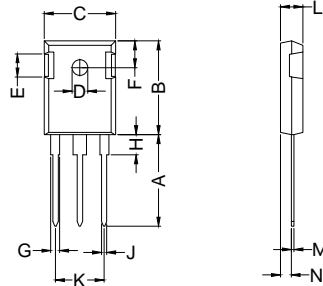
STYN1255

Discrete Thyristors(SCRs)



K=Cathode, A=Anode, G=Cate

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
∅D	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

	V _{RRM} V	V _{RSM} V
STYN1255	1200	1300

Symbol	Test Conditions	Maximum Ratings	Unit
I _{TRMS} I _{TAVM}	T _{VJ} =T _{VJM} T _C =85°C; 180° sine	55 35	A
I _{TSM}	T _{VJ} =45°C 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 ² t	T _{VJ} =45°C V _R =0 t=10ms (50Hz), sine t=8.3ms (60Hz), sine	450 440	A ² s
	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 150	A/us
		non repetitive, I _T =I _{TAVM} 500	
(dv/dt) _{cr}	T _{VJ} =T _{VJM} ; R _{GK} =∞; 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 5 t _p =300us	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

Sirectifier[®]

STYN1255

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	$I_T=55A; T_{VJ}=25^{\circ}C$	1.6	V
V_{TO}	For power-loss calculations only ($T_{VJ}=125^{\circ}C$)	0.9	V
r_T		15	m Ω
V_{GT}	$V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	1.0 1.2	V
I_{GT}	$V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ $T_{VJ}=125^{\circ}C$	65 80 50	mA
V_{GD}	$T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$	0.2	V
I_{GD}		5	mA
I_L	$T_{VJ}=25^{\circ}C; t_p=10\mu s;$ $I_G=0.3A; di_G/dt=0.3A/\mu s$	150	mA
I_H	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	100	mA
t_{gd}	$T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.3A; di_G/dt=0.3A/\mu s$	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
STYN1255	TO-247AD	30pcs / Tube	STYN1255

Sirectifier®

STYN1255

Discrete Thyristors(SCRs)

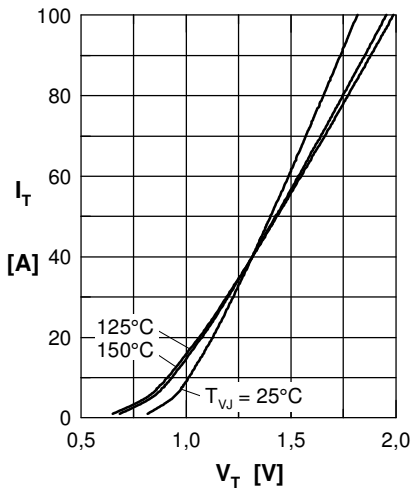


Fig. 1 Forward characteristics

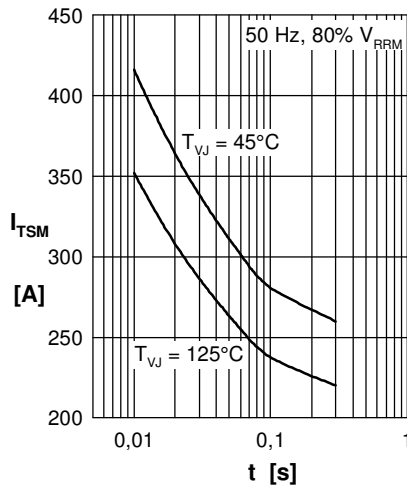


Fig. 2 Surge overload current

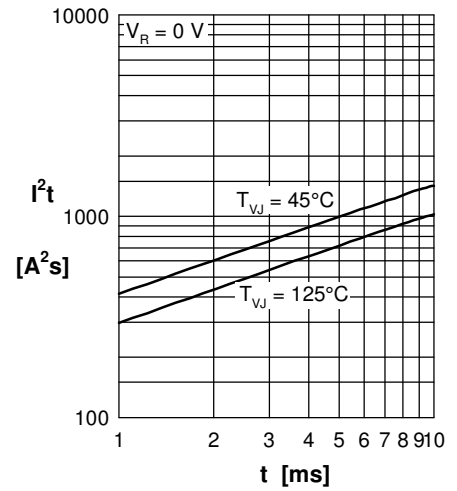


Fig. 3 I^2t versus time (1-10 ms)

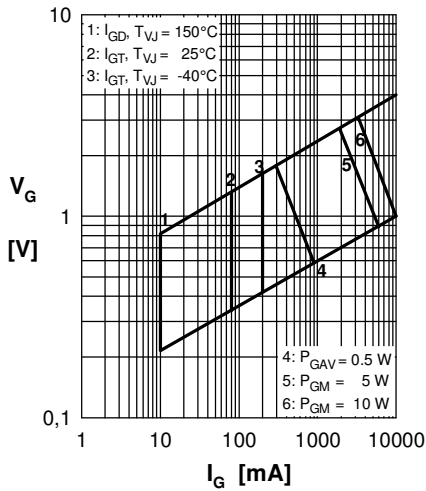


Fig. 4 Gate trigger characteristics

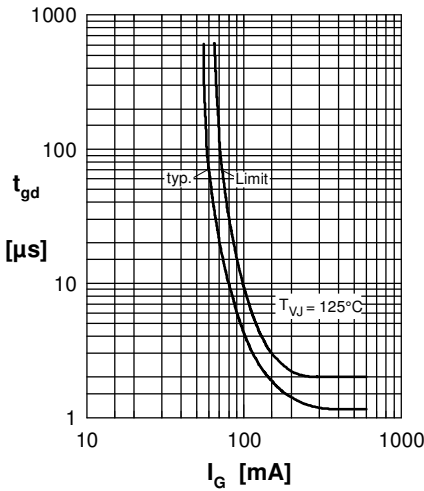


Fig. 5 Gate controlled delay time

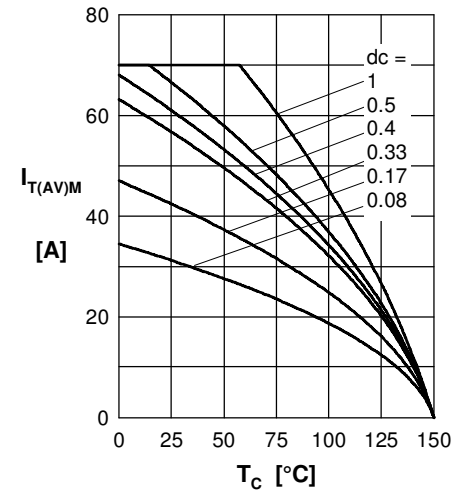


Fig. 6 Max. forward current at case temperature

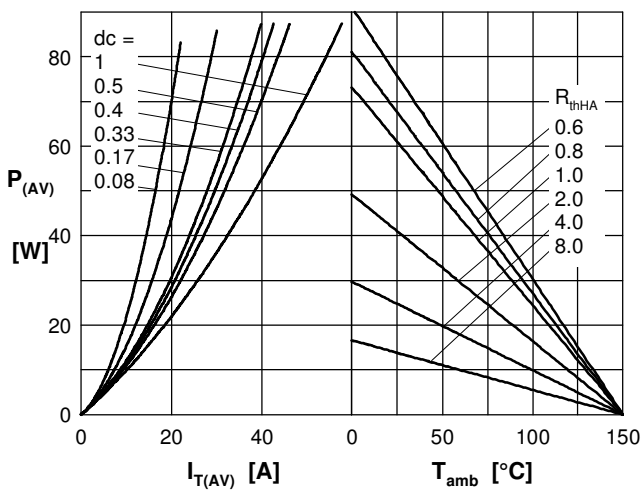


Fig. 7a Power dissipation versus direct output current
Fig. 7b and ambient temperature

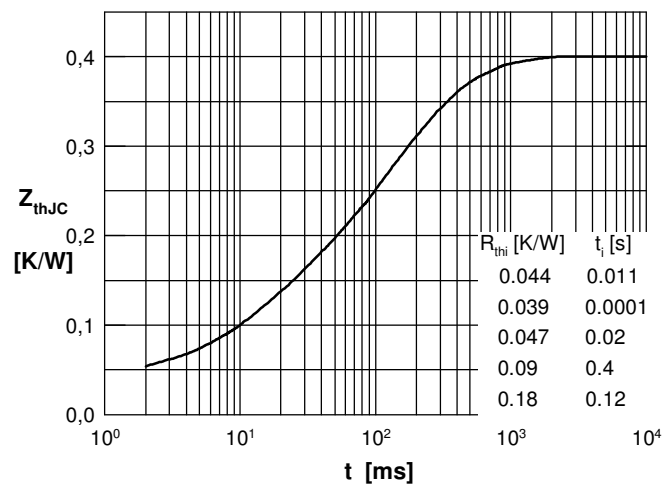


Fig. 8 Transient thermal impedance junction to case