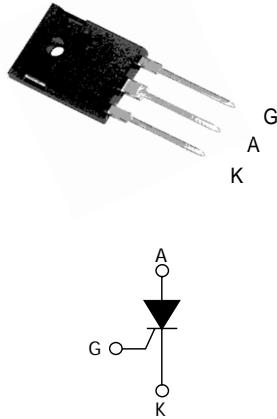
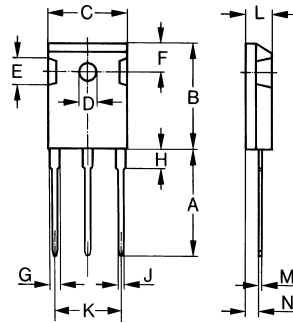


# STYN255 thru STYN855

## Discrete Thyristors(SCRs)



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	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102

### ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state current (180° conduction angle)		$T_c = 75^\circ C$ 55	A
$I_{T(AV)}$	Average on-state current (180° conduction angle)		$T_c = 75^\circ C$ 35	A
$I_{TSM}$	Non repetitive surge peak on-state current	$t_p = 8.3 \text{ ms}$	$T_j = 25^\circ C$ 610	A
		$t_p = 10 \text{ ms}$		
$I^2 t$	$I^2 t$ Value for fusing		$T_j = 25^\circ C$ 1680	$A^2 s$
$di/dt$	Critical rate of rise of on-state current $I_G = 2 \times I_{GT}$ , $t_r < 100 \text{ ns}$	$F = 60 \text{ Hz}$	$T_j = 125^\circ C$ 50	$A/\mu s$
$I_{GM}$	Peak gate current	$t_p = 20 \mu s$	$T_j = 125^\circ C$ 8	A
$P_{G(AV)}$	Average gate power dissipation		$T_j = 125^\circ C$ 1	W
$T_{stg}$ $T_j$	Storage junction temperature range Operating junction temperature range		- 40 to + 150 - 40 to + 125	$^\circ C$
$V_{RGM}$	Maximum peak reverse gate voltage (for TN8 & TYN only)		5	V

# STYN255 thru STYN855

## Discrete Thyristors(SCRs)

### ELECTRICAL CHARACTERISTICS (T<sub>j</sub> = 25°C, unless otherwise specified)

Symbol	Test Conditions			TYNx08(S)	Unit		
I <sub>GT</sub>	V <sub>D</sub> = 12 V	R <sub>L</sub> = 33 W	MIN.	8	mA		
			MAX.	80			
V <sub>GT</sub>			MAX.	1.3	V		
V <sub>GD</sub>	V <sub>D</sub> = V <sub>DRM</sub>	R <sub>L</sub> = 3.3 kW	T <sub>j</sub> = 125°C	MIN.	0.2	V	
I <sub>H</sub>	I <sub>T</sub> = 500mA	Gate open		MAX.	150	mA	
I <sub>L</sub>	I <sub>G</sub> = 1.2 I <sub>GT</sub>			MAX.	200	mA	
dV/dt	V <sub>D</sub> = 67 % V <sub>DRM</sub>	Gate open		T <sub>j</sub> = 125°C	MIN.	1000	V/μs
V <sub>TM</sub>	I <sub>TM</sub> = 100 A	tp = 380 μs		T <sub>j</sub> = 25°C	MAX.	1.9	V
V <sub>t0</sub>	Threshold voltage		T <sub>j</sub> = 125°C	MAX.	1.0	V	
R <sub>d</sub>	Dynamic resistance		T <sub>j</sub> = 125°C	MAX.	8.5	mW	
I <sub>DRM</sub>	V <sub>DRM</sub> = V <sub>RRM</sub>	T <sub>j</sub> = 25°C		MAX.	10	μA	
I <sub>RRM</sub>		T <sub>j</sub> = 125°C			5	mA	

### THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R <sub>th(j-c)</sub>	Junction to case (DC)	0.9	°C/W
R <sub>th(j-a)</sub>	Junction to ambient (DC)	50	°C/W

S= copper surface under tab

### PRODUCT SELECTOR

Part Number	Voltage (xxx)	Sensitivity	Package
STYNx55	200~~800	80 mA	TO-247AD

### OTHER INFORMATION

Part Number	Marking	Weight	Base Quantity	Packing mode
STYN x55	STYN x55	4.5 g	120	Bulk

Note: x = voltage