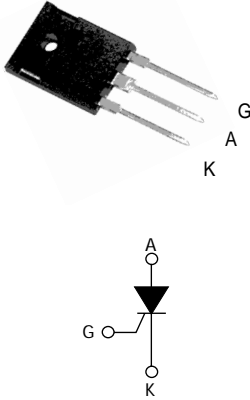
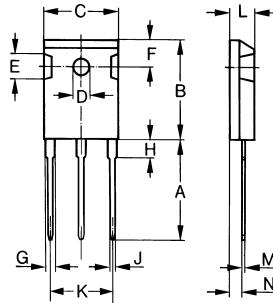


# STYN1030 thru STYN1630

## 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

Symbol	Test Conditions	Maximum Ratings STYN230~830 / STYN1030~1630	Unit
$I_{TRMS}$ $I_{TAVM}$	$T_{VJ}=T_{VJM}$ $T_C=85^{\circ}C$ ; 180° sine	30 19	A
$I_{TSM}$	$T_{VJ}=45^{\circ}C$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	200 215	A
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	180 195	
$i^2t$	$T_{VJ}=45^{\circ}C$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	200 195	$A^2s$
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	162 158	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ f=50Hz, $t_p=200\mu s$ $V_D=2/3V_{DRM}$ $I_G=0.3A$ $di_G/dt=0.3A/\mu s$ repetitive, $I_T=40A$	150	A/ $\mu s$
	non repetitive, $I_T=I_{TAVM}$	500	
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$ ; $R_{GK}=\infty$ ; method 1 (linear voltage rise) $V_{DR}=2/3V_{DRM}$	1000	V/ $\mu s$
$P_{GM}$	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$ $t_p=30\mu s$ $t_p=300\mu s$	10 5	W
$P_{GAV}$		0.5	W
$V_{RGM}$		10	V
$T_{VJ}$ $T_{VJM}$ $T_{stg}$		-40...+125 125 -40...+125	$^{\circ}C$
$M_d$ $F_c$	Mounting torque (M3) Mounting force with clip	0.8...1.2 20...120	Nm N
Weight		6	g



# STYN1030 thru STYN1630

## Discrete SCRs (Thyristors)

Symbol	Test Conditions	Characteristic Values	Unit
$I_R, I_D$	$T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$	10	mA
$V_T$	$I_T=25A; T_{VJ}=25^{\circ}C$	2.1	V
$V_{TO}$	For power-loss calculations only ( $T_{VJ}=125^{\circ}C$ )	1.1	V
$r_T$		40	m $\Omega$
$V_{GT}$	$V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	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	$\mu s$
$R_{thJC}$	DC current	0.62	K/W
$R_{thJH}$	DC current	0.82	K/W
<b>a</b>	Max. acceleration, 50 Hz	50	m/s <sup>2</sup>

