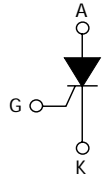
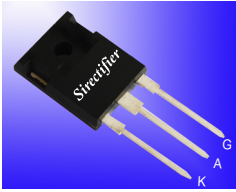
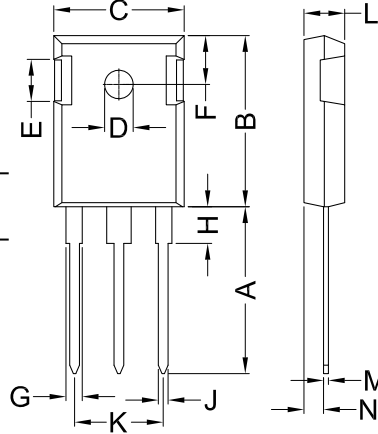


STYN230 thru STYN1830

Thyristor Discretes (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

K=Cathode, A=Anode, G=Cate

	VRRM	VRSM
	V	V
STYN230	200	300
STYN630	600	700
STYN830	800	900
STYN1030	1000	1100
STYN1230	1200	1300
STYN1630	1600	1700
STYN1830	1800	1900

Symbol	Test Conditions	Maximum Ratings	Unit
		STYN230~830 / STYN1030~1830	
I_{TRMS} I_{TAVM}	$T_{VJ}=T_{VJM}$ $T_C=85^\circ\text{C}$; 180° sine	30 19	A
I_{TSM}	$T_{VJ}=45^\circ\text{C}$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	160 180	A
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	140 160	
i^2t	$T_{VJ}=45^\circ\text{C}$ $V_R=0$ t=10ms (50Hz), sine t=8.3ms (60Hz), sine	128 134	A ² s
	$T_{VJ}=T_{VJM}$ $V_R=0$ t=10ms(50Hz), sine t=8.3ms(60Hz), sine	100 105	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ f=50Hz, $t_p=200\mu\text{s}$ $V_D=2/3V_{DRM}$ $I_G=0.15\text{A}$ $di_G/dt=0.15\text{A}/\mu\text{s}$ repetitive, $I_T=40\text{A}$	100	A/ μs
	non repetitive, $I_T=I_{TAVM}$	500	
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $R_{GK}=\infty$; method 1 (linear voltage rise) $V_{DR}=2/3V_{DRM}$	500	V/ μs
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$ $t_p=30\mu\text{s}$ $t_p=300\mu\text{s}$	5 2.5	W
		0.5	
P_{GAV}		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

STYN230 thru STYN1830

Thyristor Discretes (SCRs)

Symbol	Test Conditions	Characteristic Values		Unit
		STYN230~830	STYN1030~1830	
I_R, I_D	$T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$	5		mA
V_T	$I_T=30A; T_{VJ}=25^{\circ}C$	1.50	1.60	V
V_{TO}	For power-loss calculations only ($T_{VJ}=125^{\circ}C$)	0.85		V
r_T		27		$m\Omega$
V_{GT}	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	1.5 2.5		V
I_{GT}	$V_D=6V;$ $T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	25 50		mA
V_{GD}	$T_{VJ}=T_{VJM};$ $V_D=2/3V_{DRM}$	0.2		V
I_{GD}		3		mA
I_L	$T_{VJ}=25^{\circ}C; t_p=10\mu s;$ $I_G=0.1A; di_G/dt=0.1A/\mu s$	75		mA
I_H	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	50		mA
t_{gd}	$T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.1A; di_G/dt=0.1A/\mu s$	2		μs
R_{thJC}	DC current	1.0		K/W
R_{thJH}	DC current	typ.	0.25	K/W
a	Max. acceleration, 50 Hz	50		m/s^2

