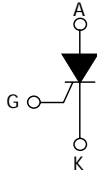
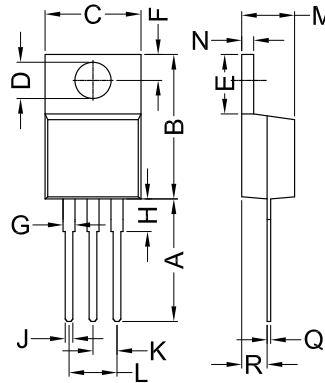


STYN210(S) thru STYN1010(S)

Thyristor Discretes(SCRs)

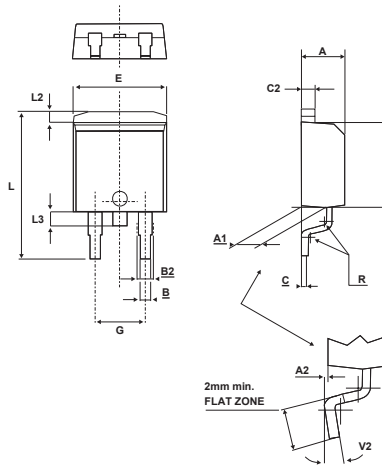
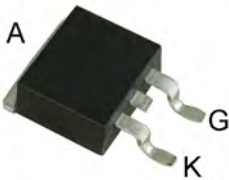


Dimensions TO-220AB



REF.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	12.70	13.97	0.500	0.550
B	14.73	16.00	0.580	0.630
C	9.91	10.66	0.390	0.420
D	3.54	4.08	0.139	0.161
E	5.85	6.85	0.230	0.270
F	2.54	3.18	0.100	0.125
G	1.15	1.65	0.045	0.065
H	2.79	5.84	0.110	0.230
J	0.64	1.01	0.025	0.040
K	2.54	BSC	0.100	BSC
L	5.08	BSC	0.200	BSC
M	4.32	4.82	0.170	0.190
N	1.14	1.39	0.045	0.055
Q	0.35	0.56	0.014	0.022
R	2.29	2.79	0.090	0.110

Dimensions TO-263(D²PAK)



REF.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.30		4.60	0.169		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.037
B2	1.25	1.40		0.048	0.055	
C	0.45		0.60	0.017		0.024
C2	1.21		1.36	0.047		0.054
D	8.95		9.35	0.352		0.368
E	10.00		10.28	0.393		0.405
G	4.88		5.28	0.192		0.208
L	15.00		15.85	0.590		0.624
L2	1.27		1.40	0.050		0.055
L3	1.40		1.75	0.055		0.069
R		0.40			0.016	
V2	0°		8°	0°		8°

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit				
$I_{T(RMS)}$	RMS on-state current (180° conduction angle)	$T_c = 100^\circ C$ 10	A				
$I_{T(AV)}$	Average on-state current (180° conduction angle)	$T_c = 100^\circ C$ 6.4	A				
I_{TSM}	Non repetitive surge peak on-state current	$t_p = 8.3$ ms 105	A				
		$t_p = 10$ ms 100					
$I^2 t$	$I^2 t$ Value	$t_p = 10$ ms 50	A ² S				
dl/dt	Critical rate of rise of on-state current Gate supply: $I_g = 100$ mA $dl/dt = 1$ A/ μ s	50	A/ μ s				
T_{stg} T_j	Storage junction temperature range Operating junction temperature range	- 40 to + 150 - 40 to + 125	°C				
TI	Maximum lead soldering temperature during 10s at 4.5mm from case	260	°C				
		STYN					
		210	410	610	810	1010	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage $T_j = 125^\circ C$	200	400	600	800	1000	V

STYN210(S) thru STYN1010(S)

Thyristor Discretes(SCRs)

ELECTRICAL CHARACTERISTICS ($T_j = 25^\circ\text{C}$, unless otherwise specified)

■ STANDARD

Symbol	Test Conditions		Value	Unit	
I_{GT}	$V_D = 12\text{ V}$ $R_L = 33\text{ W}$	$T_j = 25^\circ\text{C}$	MAX.	15	mA
V_{GT}		$T_j = 25^\circ\text{C}$	MAX.	1.5	V
V_{GD}	$V_D = V_{DRM}$ $R_L = 3.3\text{ kW}$	$T_j = 110^\circ\text{C}$	MIN.	0.2	V
tgt	$V_D = V_{DRM}$ $I_G = 40\text{mA}$ $dI_G/dt = 0.5\text{ A}/\mu\text{s}$	$T_j = 25^\circ\text{C}$	TYP.	2	μs
I_H	$I_T = 100\text{ mA}$ Gate open	$T_j = 25^\circ\text{C}$	MAX.	30	mA
I_L	$I_G = 1.2 I_{GT}$	$T_j = 25^\circ\text{C}$	TYP.	50	mA
dV/dt	$V_D = 67\% V_{DRM}$ Gate open	μs $T_j = 110^\circ\text{C}$	MIN.	200	V/ μs
V_{TM}	$I_{TM} = 20\text{ A}$ $t_p = 380\text{ }\mu\text{s}$	$T_j = 25^\circ\text{C}$	MAX.	1.6	V
tq	$V_D = 67\% V_{DRM}$ $I_{TM} = 20\text{A}$ $V_R = 25\text{V}$ $dI_{TM}/dt = 30\text{ A}/\mu\text{s}$ $dV_D/dt = 50\text{V}/\mu\text{s}$	$T_j = 110^\circ\text{C}$	TYP.	70	μs
I_{DRM}	V_{DRM} rated	$T_j = 25^\circ\text{C}$	MAX.	0.01	mA
I_{RRM}	V_{RRM} rated	$T_j = 110^\circ\text{C}$		2	mA

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to case (DC)	1.90	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	Junction to ambient (DC)	TO-220AB	45
		$S = 1.0\text{ cm}^2$ TO-263	60

S= copper surface under tab

PRODUCT SELECTOR

Part Number	Voltage (xxx)	Sensitivity	Package
STYNX10S	200~~1000	15 mA	TO-263
STYNX10	200~~1000	15 mA	TO-220AB

OTHER INFORMATION

Part Number	Marking	Weight	Base Quantity	Packing mode
STYNX10S	STYNX10S	1.50 g	50	Tube
STYNX10	STYNX10	1.90 g	50	Tube

Note: x = voltage

