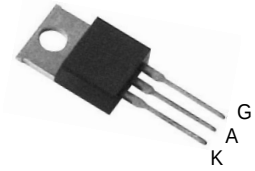
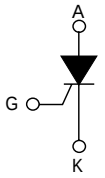
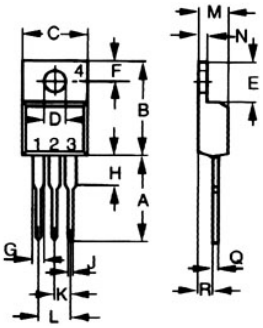
STYN210(S) thru STYN1010(S)

Discrete Thyristors(SCRs)

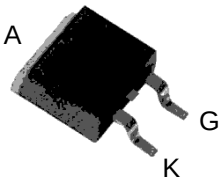




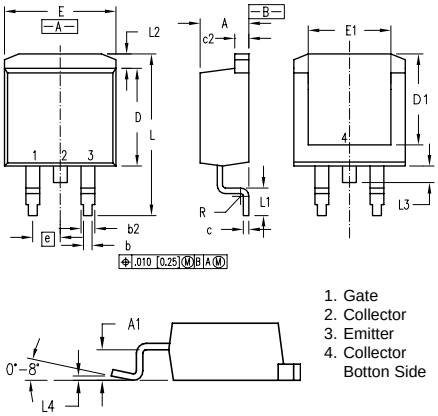
Dimensions TO-220AB



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



Dimensions TO-263(D^2PAK)



1. Gate
2. Collector
3. Emitter
4. Collector
Botton Side

Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.06	4.83	.160	.190
A1	2.03	2.79	.080	.110
b	0.51	0.99	.020	.039
b2	1.14	1.40	.045	.055
c	0.46	0.74	.018	.029
c2	1.14	1.40	.045	.055
D	8.64	9.65	.340	.380
D1	8.00	8.89	.315	.350
E	9.65	10.29	.380	.405
E1	6.22	8.13	.245	.320
e	2.54 BSC		.100 BSC	
L	14.61	15.88	.575	.625
L1	2.29	2.79	.090	.110
L2	1.02	1.40	.040	.055
L3	1.27	1.78	.050	.070
L4	0	0.20	0	.008
R	0.46	0.74	.018	.029

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state current (180° conduction angle)	Tc = 100°C	10	A
$IT_{(AV)}$	Average on-state current (180° conduction angle)	Tc = 100°C	6.4	A
I_{TSM}	Non repetitive surge peak on-state current	tp = 8.3 ms	105	A
		tp = 10 ms	100	
I^2t	I^2t Value	tp = 10 ms	50	A^2s
dI/dt	Critical rate of rise of on-state current Gate supply:I_G = 100mA dI_G/dt = 1A/µs		50	A/µs
T_{stg} Tj	Storage junction temperature range Operating junction temperature range		- 40 to + 150 - 40 to + 125	°C
Tl	Maximum lead soldering temperature during 10s at 4.5mm from case		260	°C

		TYN					
		210	410	610	810	1010	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Tj = 125°C	200	400	600	800	1000	V

Sirectifier®

STYN210(S) thru STYN1010(S)

Discrete Thyristors(SCRs)

ELECTRICAL CHARACTERISTICS (Tj = 25°C, unless otherwise specified)

■ **STANDARD**

Symbol	Test Conditions			TYNx08(S)	Unit
I_{GT}	V_D = 12 V R_L = 33 W	Tj = 25°C	MAX.	15	mA
V_{GT}		Tj = 25°C	MAX.	1.5	V
V_{GD}	$V_D = V_{DRM}$ R_L = 3.3 kW	Tj = 110°C	MIN.	0.2	V
tgt	$V_D = V_{DRM}$ I_G =40mA dIG/dt = 0.5 A/µs	Tj = 25°C	TYP	2	µs
I_H	I_T = 100 mA Gate open	Tj = 25°C	MAX.	30	mA
I_L	$I_G = 1.2\ I_{GT}$	Tj = 25°C	TYP	50	mA
dV/dt	V_D = 67 % V_{DRM} Gate open µs	Tj = 110°C	MIN.	200	V/µs
V_{TM}	I_{TM} = 20 A tp = 380 µs	Tj = 25°C	MAX.	1.6	V
tq	V_D = 67 % V_{DRM} I_{TM}=20A V_R=25V dITM/dt=30 A/µs dVD/dt=50V /µs	Tj = 110°C	TYP	70	µs
I_{DRM}	V_{DRM} rated	Tj = 25°C	MAX.	0.01	mA
I_{RRM}	V_{RRM} rated	Tj = 110°C		2	mA

THERMAL RESISTANCES

Symbol	Parameter			Value	Unit
$R_{th(j-c)}$	Junction to case (DC)			2.5	°C/W
$R_{th(j-a)}$	Junction to ambient (DC)		TO-220AB	60	°C/W
		S =1.0 cm^2	TO-263	45	

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	1.5 g	50	Tube
STYNx10	STYNx10	2.3 g	250	Bulk

Note: x = voltage