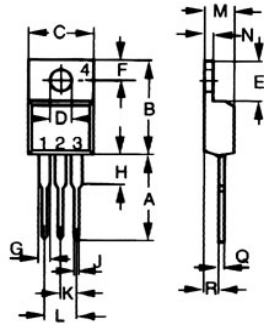
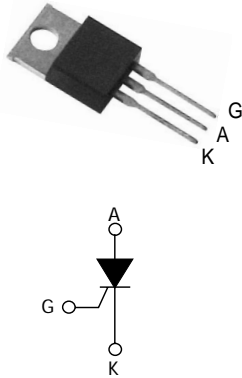


STYN210(S) thru STYN1010(S)

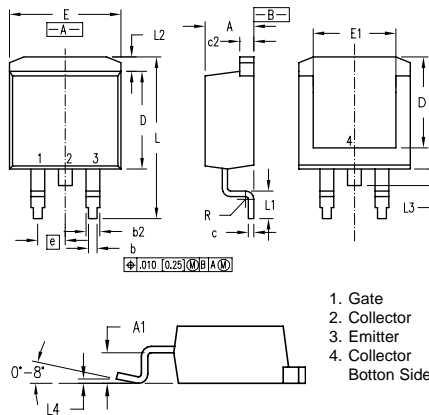
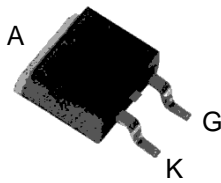
Discrete Thyristors(SCRs)

Dimensions TO-220AB



Dim.	Inches		Millimeter	
	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(D²PAK)



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)	$T_c = 100^\circ C$ 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				
		$t_p = 10$ ms	100				
$I^2 t$	$I^2 t$ Value	$t_p = 10$ ms	50				
di/dt	Critical rate of rise of on-state current Gate supply: $I_g = 100$ mA $di/dt = 1$ 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	$^\circ C$				
T_l	Maximum lead soldering temperature during 10s at 4.5mm from case	260	$^\circ C$				
		TYN					
		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)

Discrete Thyristors(SCRs)

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

■ STANDARD

Symbol	Test Conditions			TYNx08(S)	Unit	
I _{GT}	V _D = 12 V R _L = 33 W	T _j = 25°C	MAX.	15	mA	
V _{GT}		T _j = 25°C	MAX.	1.5	V	
V _{GD}	V _D = V _{DRM} R _L = 3.3 kW	T _j = 110°C	MIN.	0.2	V	
t _{gt}	V _D = V _{DRM} I _G = 40mA dI _G /dt = 0.5 A/μs	T _j = 25°C	TYP.	2	μs	
I _H	I _T = 100 mA Gate open	T _j = 25°C	MAX.	30	mA	
I _L	I _G = 1.2 I _{GT}	T _j = 25°C	TYP.	50	mA	
dV/dt	V _D = 67 % V _{DRM} Gate open	μs	T _j = 110°C	MIN.	200	V/μs
V _{TM}	I _{TM} = 20 A t _p = 380 μs	T _j = 25°C	MAX.	1.6	V	
t _q	V _D = 67 % V _{DRM} I _{TM} =20A V _R =25V dI _{TM} /dt=30 A/μs dV _D /dt=50V /μs	T _j = 110°C	TYP.	70	μs	
I _{DRM}	V _{DRM} rated	T _j = 25°C	MAX.	0.01	mA	
I _{RRM}	V _R rated	T _j = 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
		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