

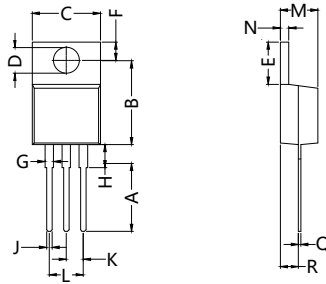
# STYN216(S) thru STYN1216(S)

## Discrete Thyristors(SCRs)

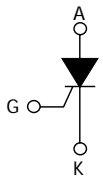


STYN216~STYN1216

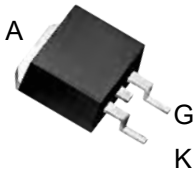
Dimensions TO-220AB



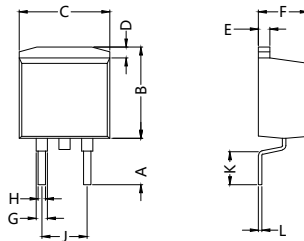
Dim.	Millimeter	
	Min.	Max.
A	12.70	13.97
B	14.73	16.00
C	9.91	10.66
ØD	3.54	4.08
E	5.85	6.85
F	2.54	3.18
G	1.15	1.65
H	2.79	5.84
J	0.64	1.01
K	2.45BSC	
L	5.05BSC	
M	4.32	4.82
N	1.14	1.39
Q	0.35	0.56
R	2.29	2.79



Dimensions TO-263(D<sup>2</sup>PAK)



STYN216S~STYN1216S



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	5.00	5.60	0.197	0.220
B	9.32	10.52	0.367	0.414
C	9.60	10.40	0.378	0.409
D	1.10	1.40	0.043	0.055
E	1.20	1.50	0.047	0.059
F	4.32	4.82	0.170	0.190
G	1.15	1.65	0.045	0.065
H	0.64	1.00	0.025	0.039
J	4.80	5.20	0.189	0.205
K	2.80	3.90	0.110	0.154
L	0.30	0.45	0.012	0.018



### ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
$I_{T(RMS)}$	RMS on-state current (180° conduction angle)		$T_c = 110^\circ C$	A
$I_{T(AV)}$	Average on-state current (180° conduction angle)		$T_c = 110^\circ C$	A
$I_{TSM}$	Non repetitive surge peak on-state current	$t_p = 8.3 \text{ ms}$	$T_j = 25^\circ C$	200
		$t_p = 10 \text{ ms}$		190
$I^2 t$	$I^2 t$ Value for fusing	$t_p = 10 \text{ ms}$	$T_j = 25^\circ C$	180
$di/dt$	Critical rate of rise of on-state current $I_G = 2 \times I_{GT}$ , $t_r \leq 100 \text{ ns}$	$F = 60 \text{ Hz}$	$T_j = 125^\circ C$	50
$I_{GM}$	Peak gate current	$t_p = 20 \mu s$	$T_j = 125^\circ C$	4
$P_{G(AV)}$	Average gate power dissipation		$T_j = 125^\circ C$	1
$T_{stg}$ $T_j$	Storage junction temperature range Operating junction temperature range		- 40 to + 150 - 40 to + 125	°C
$V_{RGM}$	Maximum peak reverse gate voltage (for STYN only)		5	V



# STYN216(S) thru STYN1216(S)

## Discrete Thyristors(SCRs)

### ELECTRICAL CHARACTERISTICS (T<sub>j</sub> = 25°C, unless otherwise specified)

#### ■ STANDARD

Symbol	Test Conditions			TYNx08(S)	Unit	
I <sub>GT</sub>	V <sub>D</sub> = 12 V	R <sub>L</sub> = 33 W	MIN.	2	mA	
			MAX.	25		
V <sub>GT</sub>			MAX.	1.3	V	
V <sub>GD</sub>	V <sub>D</sub> = V <sub>DRM</sub>	R <sub>L</sub> = 3.3 kW	T <sub>j</sub> = 125°C	MIN.	0.2	V
I <sub>H</sub>	I <sub>T</sub> = 500 mA Gate open			MAX.	40	mA
I <sub>L</sub>	I <sub>G</sub> = 1.2 I <sub>GT</sub>			MAX.	60	mA
dV/dt	V <sub>D</sub> = 67 % V <sub>DRM</sub>	Gate open	T <sub>j</sub> = 125°C	MIN.	500	V/μs
V <sub>TM</sub>	I <sub>TM</sub> = 32 A	tp = 380 μs	T <sub>j</sub> = 25°C	MAX.	1.6	V
V <sub>t0</sub>	Threshold voltage		T <sub>j</sub> = 125°C	MAX.	0.77	V
R <sub>d</sub>	Dynamic resistance		T <sub>j</sub> = 125°C	MAX.	23	mW
I <sub>DRM</sub>	V <sub>DRM</sub> = V <sub>RRM</sub>		T <sub>j</sub> = 25°C	MAX.	5	μA
I <sub>RRM</sub>			T <sub>j</sub> = 125°C		2	mA

### THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R <sub>th(j-c)</sub>	Junction to case (DC)		1.1	°C/W
R <sub>th(j-a)</sub>	Junction to ambient		TO-220AB	°C/W
		S = 1.0 cm <sup>2</sup>	TO-263	

S= copper surface under tab

### PRODUCT SELECTOR

Part Number	Voltage (xxx)	Sensitivity	Package
STYNxx16S	200~1200	15 mA	TO-263
STYNxx16	200~1200	15 mA	TO-220AB

### OTHER INFORMATION

Part Number	Marking	Weight	Base Quantity	Packing mode
STYNxx16S	STYN xx16S	1.8 g	50	Tube
STYNxx16	STYNxx16	2.0 g	50	Tube

Note: x = voltage

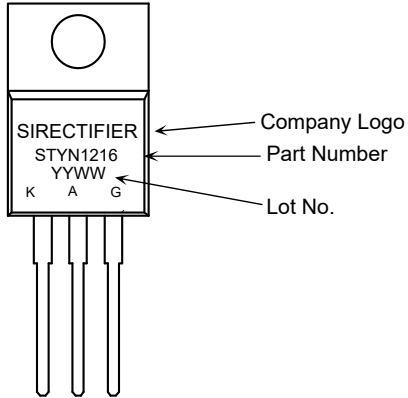


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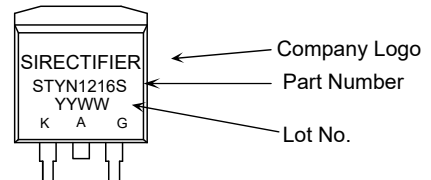
## Discrete Thyristors(SCRs)

### Marking

STYN1216  
(TO-220AB)



STYN1216S  
(TO-263)



### Ordering Information

Part Number	Package	Shipping	Marking Code
STYN1216	TO-220AB	50pcs / Tube	STYN1216
STYN1216S	TO-263	50pcs / Tube or 800pcs / Tape & Reel	STYN1216S