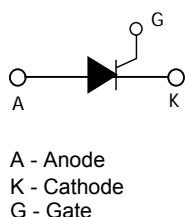
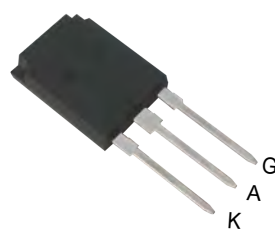
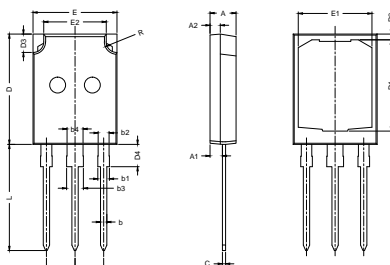


STOE116G12B5

High Efficiency Thyristor Discretes



Dimensions TO-247P



Dim.	Millimeter		Dim.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.85	5.10	D2	0.96	1.25
A1	2.31	2.51	D3	3.35	3.80
A2	1.85	2.10	D4	3.95	4.45
b	1.16	1.26	E	15.80	16.05
b1	/	2.25	E1	13.50	14.40
b2	1.96	2.15	E2	11.25	12.45
b3	/	3.25			
b4	2.96	3.15	e	5.44(BSC)	
c	0.59	0.66	L	19.80	20.25
D	20.85	21.10			
D1	17.15	17.75	R	1.90	2.10

V_{RRM}	V_{RSM}
V	V

STOE116G12B5	1200	1300
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Symbol	Test Conditions	Maximum Ratings	Unit
I_{TRMS} I_{TAVM}	$T_{VJ}=T_{VJM}$ $T_C=125^{\circ}C$; 180° sine	182 116	A
I_{TSM}	$T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	2250 2400	A
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	2000 2150	
i^2t	$T_{VJ}=45^{\circ}C$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	25300 23900	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	20000 19100	
$(di/dt)_{cr}$	$T_{VJ}=T_{VJM}$ $f=50Hz$, $t_p=200\mu s$ $V_D=2/3V_{DRM}$ $I_G=0.3A$ $di_G/dt=0.3A/\mu s$	repetitive, $I_T=250A$ 150	A/ μs
		non repetitive, $I_T=116A$ 500	
$(dv/dt)_{cr}$	$T_{VJ}=T_{VJM}$; $R_{GK}=\infty$; method 1 (linear voltage rise)	$V_{DR}=2/3V_{DRM}$ 1000	V/ μs
P_{GM}	$T_{VJ}=T_{VJM}$ $I_T=I_{TAVM}$	$t_p=30\mu s$ $t_p=300\mu s$	10 5 W
P_{GAV}		0.5	W
V_{RGM}		10	V
T_{VJ} T_{VJM} T_{stg}		-55...+125 150 -55...+125	$^{\circ}C$
F_c	Mounting force with clip	20...120	N
Weight	typical	6	g

Sirectifier[®]

STOE116G12B5

High Efficiency Thyristor Discretes

Symbol	Test Conditions	Characteristic Values	Unit
I_R, I_D	$T_{VJ}=T_{VJM}; V_R=V_{RRM}; V_D=V_{DRM}$	3	mA
V_{TM}	$I_{TM}=116A; T_{VJ}=25^{\circ}C$	1.35	V
V_{TO}	For power-loss calculations only ($T_{VJ}=150^{\circ}C$)	0.80	V
r_T		2.7	m Ω
V_{GT}	$V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$	0.9 1.2	V
I_{GT}	$V_D=6V; T_{VJ}=25^{\circ}C$ $T_{VJ}=-40^{\circ}C$ $T_{VJ}=125^{\circ}C$	50 80 30	mA
V_{GD}	$T_{VJ}=T_{VJM}; V_D=2/3V_{DRM}$	0.2	V
I_{GD}		3	mA
I_L	$T_{VJ}=25^{\circ}C; t_p=10\mu s;$ $I_G=0.3A; di_G/dt=0.3A/\mu s$	450	mA
I_H	$T_{VJ}=25^{\circ}C; V_D=6V; R_{GK}=\infty$	200	mA
t_{gd}	$T_{VJ}=25^{\circ}C; V_D=1/2V_{DRM}$ $I_G=0.3A; di_G/dt=0.3A/\mu s$	2	us
R_{thJC}	DC current	0.23	K/W
R_{thch}	DC current	0.24	K/W
a	Max. acceleration, 50 Hz	50	m/s ²

Features / Advantages:

- Thyristor for line frequency
- Glass passivated chip

Applications:

- Line rectifying 50/60 Hz
- Softstart AC motor control
- DC Motor control
- Power converter
- AC power control
- Lighting and temperature control

Package: TO-247P

- Industry standard outline
- RoHS compliant
- Epoxy meets UL 94V-0

Standard applicable to Power Semiconductors

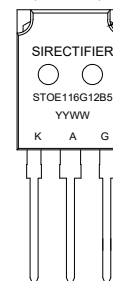
- IEC191-1/4
- IEC747-1
- IEC747-6
- IEC68-2-...
- UL94-V0

Product Reliability

- IEC147-4
- IEC68-2-14
- IEC68-2-20
- IEC68-2-27
- CECC50000-4.4.3

Marking

STOE116G12B5
(TO-247P)



Company Logo

Part Number

Lot No.

ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
STOE116G12B5	TO-247P	30pcs / Tube	STOE116G12B5

Sirectifier[®]

STOE116G12B5

High Efficiency Thyristor Discretes

