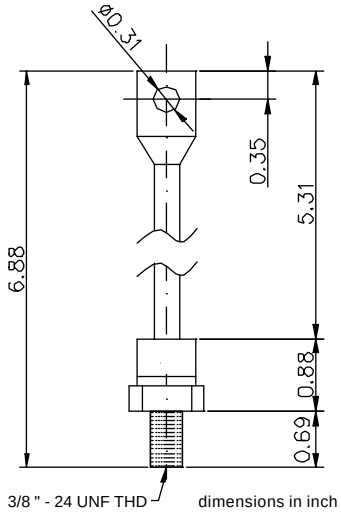
Green Power Solutions srl
Via Greto di Cornigliano 6R - 16152 Genova , Italy

Phone: +39-010-659 1869
Fax: +39-010-659 1870
Web: www.gpsemi.it
E-mail: info@gpsemi.it



GSF31012

FAST RECOVERY STUD DIODE

UL-certified insulating sleeve

VOLTAGE UP TO	**1200**	**V**
AVERAGE CURRENT	**125**	**A**
SURGE CURRENT	**2.8**	**kA**

BLOCKING CHARACTERISTICS

Characteristic		Conditions	Value	
V_{RRM}	Repetitive peak reverse voltage		1200	V
V_{RSM}	Non-repetitive peak reverse voltage		1300	V
I_{RRM}	Repetitive peak reverse current, max.	V_{RRM}, single phase, half wave, Tj = Tjmax	35	mA

FORWARD CHARACTERISTICS

$I_{F(AV)}$	Average forward current	Sine wave,180° conduction, Th = 100 °C	125	A
$I_{F(RMS)}$	R.M.S. forward current	Sine wave,180° conduction, Th = 100 °C	196	A
I_{FSM}	Surge forward current	Non rep. half sine wave, 50 Hz, V_R = 0 V, $T_j = T_{jmax}$	2.8	kA
I^2t	I² t for fusing coordination		39	kA²s
$V_{F(TO)}$	Threshold voltage	$T_j = T_{jmax}$	1.2	V
r_F	Forward slope resistance	$T_j = T_{jmax}$	2.3	mΩ
V_{FM}	Peak forward voltage, max	Forward current I_F = 450 A, Tj = 25°C	2.5	V

SWITCHING CHARACTERISTICS

t_{rr}	Rverse recovery time, typ	T_j = 125 °C , I_F = 350 A, di/dt = -25 A/µs V_R=30 V	1	µs

THERMAL AND MECHANICAL CHARACTERISTICS

$R_{th(j-c)}$	Thermal resistance (junction to case)	Double side cooled	0.25	°C/W
$R_{th(c-h)}$	Thermal resistance (case to heatsink)	Double side cooled	0.08	°C/W
T_{jmax}	Max operating junction temperature		150	°C
T_{stg}	Storage temperature		-40 / 150	°C
M	Mounting torque		10	N·m
	Mass		100	g

Ordering information

cathode on stud	anode on stud		
GSF31012-vvtt	GSFR31012-vvtt	vv=V_{RRM}/100	tt= trr [µs] * 10
example	GSF31012-1210	1200 V	1 µs @ 25°C