STSR220

HIGH EFFICIENCY SWITCHED MODE RECTIFIER

MAIN PRODUCT CHARACTERISTICS

$I_{F(AV)}$	2A
V_{RRM}	200V
V_F(max)	0.8V

F126
(Plastic)

FEATURES AND BENEFITS

- VERY LOW CONDUCTION LOSSES
- NEGLIGIBLE SWITCHING LOSSES
- LOW FORWARD AND REVERSE RECOVERY TIMES
- HIGH SURGE CURRENT

DESCRIPTION

Low voltage drop rectifiers suited for Switched Mode Power Supplies and for switching mode base drive and transistor circuit.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive peak reverse voltage		200	V
V_{RSM}	Non repetitive peak reverse voltage		220	V
I_{FRM}	Repetive peak forward current	$t_p < 20\mu s$	70	A
$I_{F(AV)}$	Average forward current *	$T_a = 75°C$ $\delta = 0.5$	2	A
I_{FSM}	Surge non repetitive forward current	$t_p = 10ms$ Sinusoidal	70	A
P_{tot}	Power dissipation *	$T_a = 75°C$	1.85	W
T_{stg} T_j	Storage temperature range Maximum junction temperature		- 40 to + 150 150	°C
T_L	Maximum lead temperature for soldering during 10s at 4mm from case		230	°C

* On infinite heatsink with 10mm lead length

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th\ (j-a)}$	Junction to ambient thermal resistance *	40	°C/W

* On infinite heatsink with 10mm lead lengh.

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_R	Reverse leakage current	$V_R = V_{RRM}$	$T_j = 25°C$			10	µA
			$T_j = 100°C$			0.5	mA
V_F	Forward voltage drop	$I_F = 2A$	$T_j = 25°C$			1	V
		$I_F = 2A$	$T_j = 100°C$			0.8	

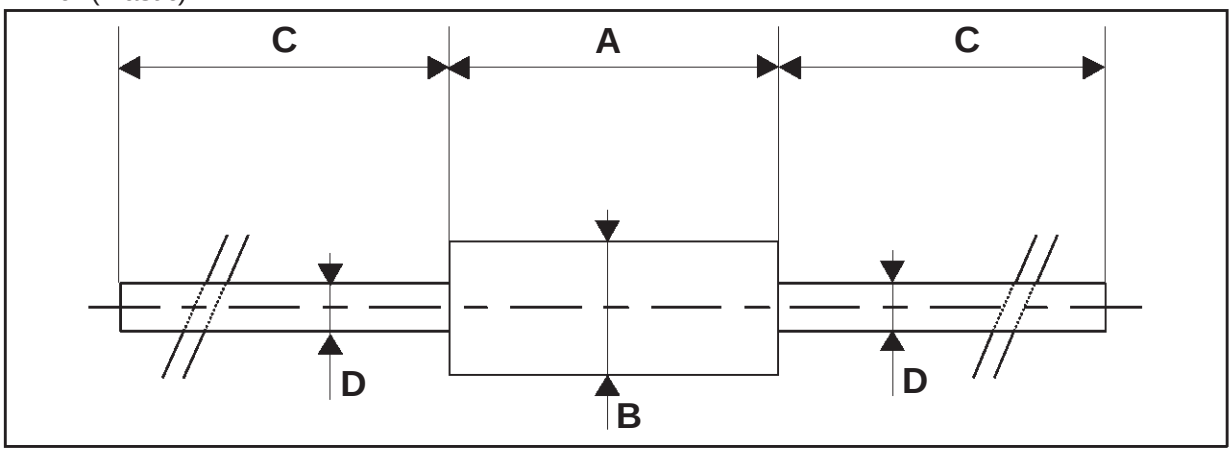
RECOVERY CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
t_{rr}	$T_j = 25°C$ $V_R = 30V$	$I_F = 1A$	$di_F/dt = -50A/\mu s$			35	ns
Q_{rr}	$T_j = 25°C$ $V_R < 30V$	$I_F = 2A$	$di_F/dt = -20A/\mu s$		12		nC
t_{fr}	$T_j = 25°C$ Measured at $1.1x\ V_F$	$I_F = 1A$	$t_r = 10ns$		20		ns
V_{FP}	$T_j = 25°C$	$I_F = 1A$	$t_r = 10ns$		5		V

To evaluate the conduction losses use the following equation:
$P = 0.68 \times I_{F(AV)} + 0.06\ I_F{}^2{}_{(RMS)}$

PACKAGE MECHANICAL DATA

F126 (Plastic)



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	6.05	6.20	6.35	0.238	0.244	0.250
B	2.95	3.00	3.05	0.116	0.118	0.120
C	26		31	1.024		1.220
D	0.76	0.81	0.86	0.030	0.032	0.034

- **Marking**: type number; ring at cathode end
- Cooling method: by convection (method A)
- Weight: 0.4 g