



STPS2060CT

POWER SCHOTTKY RECTIFIER

MAIN PRODUCT CHARACTERISTICS

$I_{F(AV)}$	2 x 10 A
V_{RRM}	60 V
V_F (max)	0.58 V

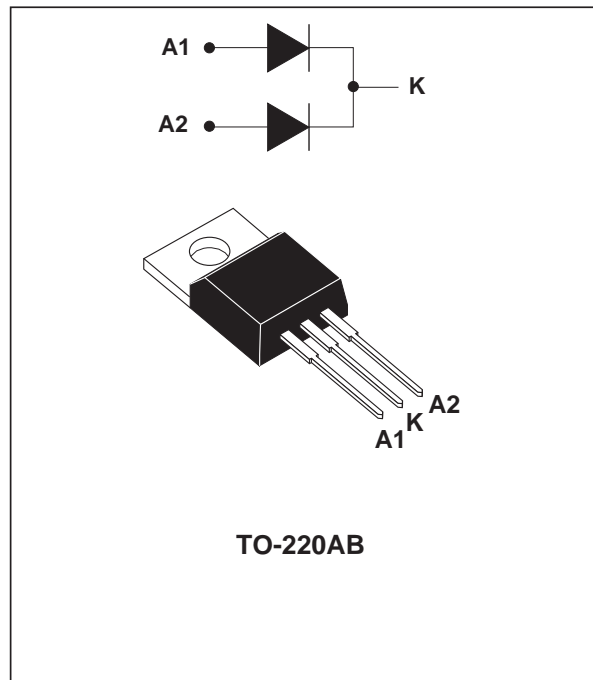
FEATURES AND BENEFITS

- NEGLIGIBLE SWITCHING LOSSES
- LOW FORWARD DROP VOLTAGE
- LOW CAPACITANCE
- HIGH REVERSE AVALANCHE SURGE CAPABILITY

DESCRIPTION

High voltage dual Schottky rectifier suited to Switch Mode Power Supplies and other Power Converters.

Packaged in TO-220AB, this device is intended for use in medium voltage operation, and particularly, in high frequency circuitries where low switching losses are required.



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit	
V_{RRM}	Repetitive peak reverse voltage		60	V	
$I_{F(RMS)}$	RMS forward current	Per diode	30	A	
$I_{F(AV)}$	Average forward current	$T_{case} = 120^{\circ}C$	Per diode	10	A
		$V_R = 60V$ $\delta = 0.5$	Per device	20	
I_{FSM}	Surge non repetitive forward current	$t_p = 10$ ms Sinusoidal	Per diode	200	A
I_{RRM}	Repetitive peak reverse current	$t_p = 2$ μs $F = 1kHz$	Per diode	1	A
I_{RSM}	Non repetitive peak reverse current	$t_p = 100$ μs	Per diode	1	A
T_{stg}	Storage temperature range		- 65 to + 150	$^{\circ}C$	
T_j	Maximum junction temperature		150		
dV/dt	Critical rate of rise of reverse voltage		10000	V/ μs	

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R _{th(j-c)}	Junction to case	Per diode	1.6	°C/W
		Total	0.9	
R _{th(c)}		Coupling	0.15	°C/W

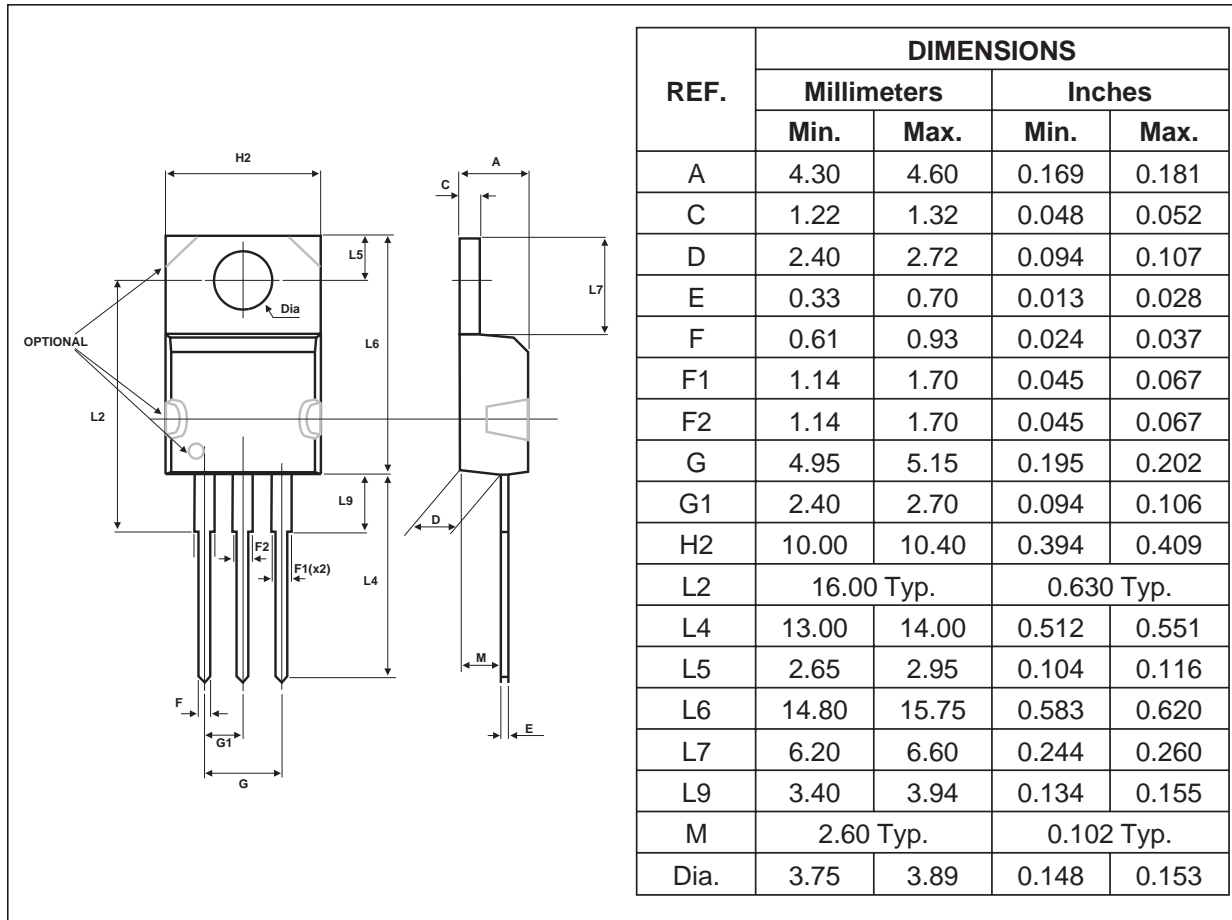
When the diodes 1 and 2 are used simultaneously :
 $T_j - T_c(\text{diode } 1) = P(\text{diode } 1) \times R_{th(j-c)}(\text{Per diode}) + P(\text{diode } 2) \times R_{th(c)}$

ELECTRICAL STATIC CHARACTERISTICS (per diode)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I _R *	Reverse leakage current	V _R = V _{RRM}	T _j = 25°C			70	μA
			T _j = 125°C			33	mA
V _F **	Forward voltage drop	I _F = 20 A	T _j = 125°C			0.8	V
		I _F = 10 A	T _j = 125°C		0.58	0.67	
		I _F = 20 A	T _j = 25°C			0.94	
C	Capacitance	60 V, 1MHz	T _j = 125°C		150		pF

Pulse test : * tp = 5 ms, duty cycle < 2 %
 ** tp = 380 μs, duty cycle < 2 %

To evaluate the conduction losses use the following equation :
 $P = 0.54 \times I_F(AV) + 0.013 \times I_F^2(RMS)$

PACKAGE MECHANICAL DATA
 TO-220AB


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