

POWER SCHOTTKY RECTIFIER

MAIN PRODUCT CHARACTERISTICS

$I_{F(AV)}$	2x3 A
V_{RRM}	40 V
V_F (max)	0.57 V

PRELIMINARY DATASHEET

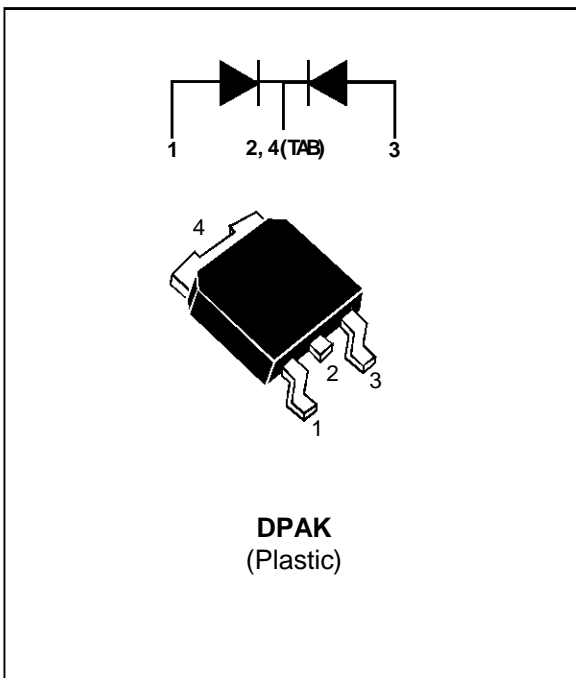
FEATURES AND BENEFITS

- NEGLIGIBLE SWITCHING LOSSES
- LOW FORWARD DROP VOLTAGE
- LOW CAPACITANCE
- HIGH REVERSE AVALANCHE SURGE CAPABILITY
- TAPE AND REEL OPTION : -TR

DESCRIPTION

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

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



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	40	V
$I_{F(RMS)}$	RMS Forward Current	6	A
$I_{F(AV)}$	Average Forward Current	$T_{case} = 120^{\circ}C$ $\delta = 0.5$	A
I_{FSM}	Surge Non Repetitive Forward Current	$t_p = 10$ ms Sinusoidal	A
I_{RRM}	Repetitive Peak Reverse Current	$t_p = 2$ μ s $F = 1$ KHz	A
T_{stg}	Storage Temperature Range	- 65 to + 150	$^{\circ}C$
T_j	Max. Junction Temperature	150	$^{\circ}C$
dV/dt	Critical Rate of Rise of Reverse Voltage	1000	V/ μ s

STPS640CB(-TR)

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
R _{TH (j-c)}	Junction to Case Thermal Resistance	Per diode	5.5
		Total	3

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Tests Conditions	Tests Conditions	Min.	Typ.	Max.	Unit
I _R *	Reverse leakage Current	T _j = 25°C	V _R = 40 V		100	μA
		T _j = 125°C		2	10	mA
V _F **	Forward Voltage drop	T _j = 25°C	I _F = 6 A		0.84	V
		T _j = 125°C	I _F = 3 A	0.5	0.57	

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

To evaluate the maximum conduction losses use the following equation :

$$P = 0.42 \times I_{F(AV)} + 0.050 I_{F(RMS)}^2$$

Typical junction capacitance, V_R = 0 V F = 1MHz T_j = 25°C C = 130pF

PACKAGE MECHANICAL DATA

DPAK

REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.094
A1	0.90		1.10	0.035		0.043
B	0.64		0.90	0.025		0.035
B2	5.20		5.40	0.204		0.212
C	0.45		0.60	0.017		0.023
C1	0.48		0.60	0.018		0.023
D	6.00		6.20	0.236		0.244
E	6.40		6.60	0.251		0.259
G	4.40		4.60	0.173		0.181
H	9.35		10.10	0.368		0.397
L1	0.60		1.00	0.023		0.039
L2		0.80			0.031	

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