

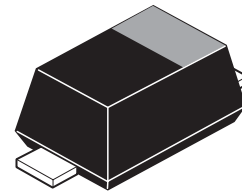
SOD523 40V LOW LEAKAGE SCHOTTKY BARRIER DIODE

SUMMARY

$V_R = 40V$; $I_{FAV} = 650mA$;
 $V_F = 570mV$ typ @ 100mA; $I_R = 1\mu A$ typ @ 30V

DESCRIPTION

Packaged in the SOD523 package this addition to the Zetex Low Leakage Schottky diode range offers an ideal low V_F /IR performance combined with a low package height of 0.9mm making the device suitable for various converter, charger, and LED driver circuits.



SOD523

FEATURES

- Low V_F
- 380mA continuous current rating
- Low profile SOD523 package (0.9mm)

APPLICATIONS

- DC - DC converters
- Mobile telecomms
- Charger circuits
- LED driver circuits
- MOSFET voltage protection circuits

ORDERING INFORMATION

DEVICE	REEL SIZE	TAPE WIDTH	QUANTITY PER REEL
ZLLS350TA	7"	8mm embossed	3,000 units
ZLLS350TC	13"	8mm embossed	10,000 units

DEVICE MARKING

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PINOUT

Cathode



Anode

TOP VIEW

ZLLS350

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	LIMIT	UNIT
Continuous reverse voltage	V_R	40	V
Continuous forward current	I_F	380	mA
Average peak forward current; D.C. = 50%	I_{FAV}	650	mA
Non repetitive forward current $t < 100\mu S$ $< 10mS$	I_{FSM}	6.0	A
		1.3	A
Power dissipation at $T_A=25^\circ C$ ^(a)	P_D	357	mW
Power dissipation at $T_A=25^\circ C$ ^(b)	P_D	413	mW
Operating and storage temperature range	T_{stg}	-55 to +150	$^\circ C$
Junction temperature	T_j	150	$^\circ C$

THERMAL RESISTANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction to ambient ^(a)	$R_{\theta JA}$	350	$^\circ C/W$
Junction to ambient ^(b)	$R_{\theta JA}$	303	$^\circ C/W$

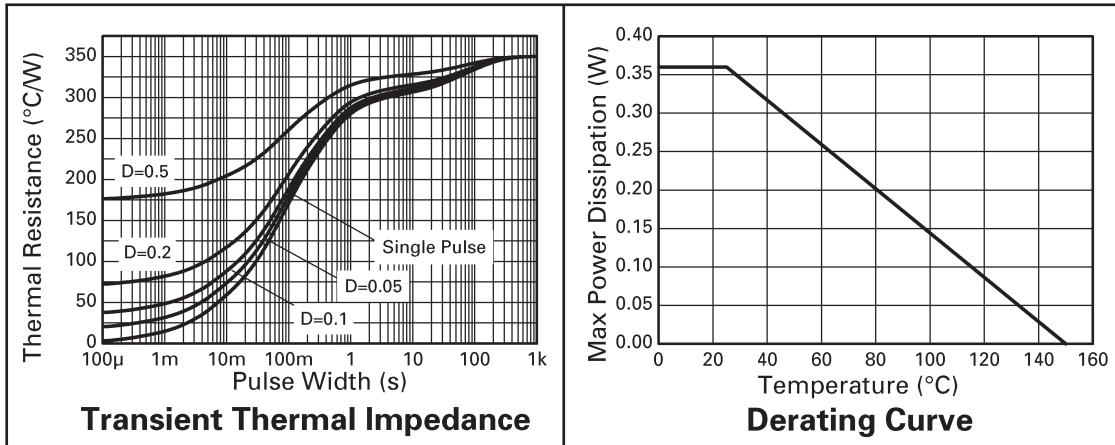
NOTES:

(a) For a single device surface mounted on 25mm x 25mm x 1.6mm FR4 PCB with high coverage of 1oz copper in still air conditions.

(b) As (a) above measured at $t < 5$ secs.

ZLLS350

CHARACTERISTICS



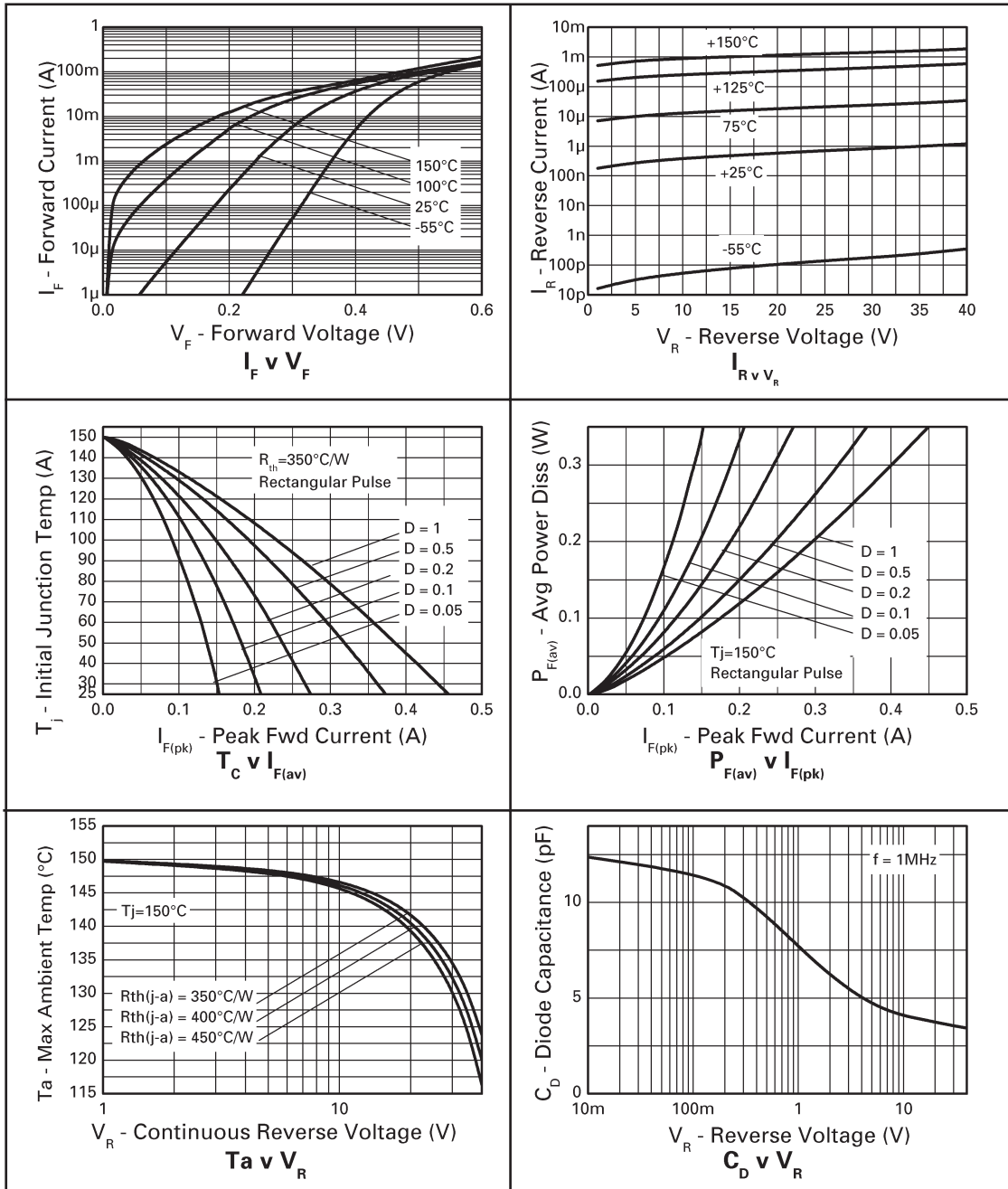
ZLLS350

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS
Reverse breakdown voltage	$V_{(BR)R}$	40	63		V	$I_R = 100\mu\text{A}$
Forward voltage	V_F		380	450	mV	$I_F = 30\text{mA}^*$
			425	520	mV	$I_F = 50\text{mA}^*$
			520	635	mV	$I_F = 100\text{mA}^*$
			780	1000	mV	$I_F = 275\text{mA}^*$
Reverse current	I_R		1	4	μA	$V_R = 30\text{V}$
Diode capacitance	C_D		3.5	6	pF	$f = 1\text{MHz}; V_R = 30\text{V}$
Reverse recovery time	t_{rr}		1		nS	Switched from $I_F = 100\text{mA}$, to $I_R = 100\text{mA}$ Measured at $I_R = 10\text{mA}$

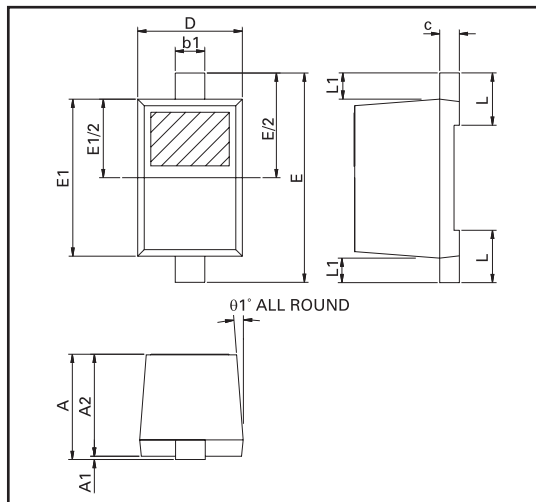
* Measured under pulsed conditions. Pulse width $\leq 300\mu\text{s}$; duty cycle $\leq 2\%$.

CHARACTERISTICS



ZLLS350

PACKAGE OUTLINE



PACKAGE DIMENSIONS

DIM	Millimeters		Inches		DIM	Millimeters		Inches	
	Min	Max	Min	Max		Min	Max	Min	Max
A	–	0.800	–	0.0314	E	1.500	1.700	0.0590	0.0669
A1	0.000	0.100	0.000	0.0039	E1	1.100	1.300	0.0433	0.0511
A2	0.600	0.800	0.0236	0.0314	L	0.200	0.400	0.0078	0.0157
b1	0.160	0.300	0.0062	0.0118	L1	0.170	0.230	0.0066	0.0090
c	0.080	0.220	0.0031	0.0086	Θ1°	4°	10°	4°	10°
D	0.700	0.900	0.0275	0.0354					

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Europe	Americas	Asia Pacific	Corporate Headquarters
Zetex GmbH Streitfeldstraße 19 D-81673 München Germany	Zetex Inc 700 Veterans Memorial Hwy Hauppauge, NY 11788 USA	Zetex (Asia) Ltd 3701-04 Metroplaza Tower 1 Hing Fong Road, Kwai Fong Hong Kong	Zetex Semiconductors plc Zetex Technology Park, Chadderton Oldham, OL9 9LL United Kingdom
Telephone: (49) 89 45 49 49 0 Fax: (49) 89 45 49 49 49 europa.sales@zetex.com	Telephone: (1) 631 360 2222 Fax: (1) 631 360 8222 usa.sales@zetex.com	Telephone: (852) 26100 611 Fax: (852) 24250 494 asia.sales@zetex.com	Telephone (44) 161 622 4444 Fax: (44) 161 622 4446 hq@zetex.com

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