SOT23 SILICON HIGH CURRENT SCHOTTKY BARRIER DIODE "SuperBAT"

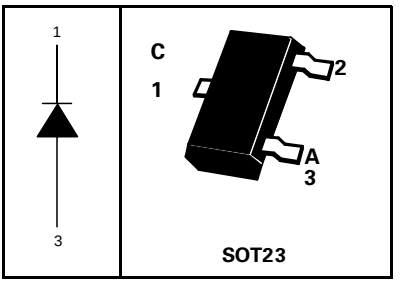
ZHCS500

ISSUE 1- September 1997 ✪

FEATURES:
- Low V_F
- High Current Capability

APPLICATIONS:
- DC - DC converters
- Mobile telecomms
- PCMCIA

PARTMARK DETAIL: ZS5



ABSOLUTE MAXIMUM RATINGS.

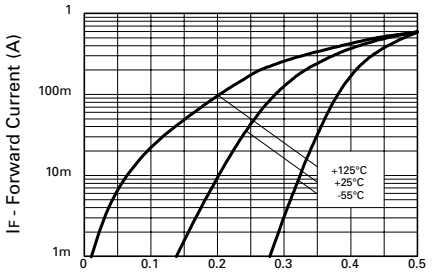
PARAMETER	SYMBOL	VALUE	UNIT
Continuous Reverse Voltage	V_R	40	V
Forward Current (Continuous)	I_F	500	mA
Forward Voltage @ I_F = 500mA	V_F	550	mV
Average Peak Forward Current; D.C. = 50%	I_{FAV}	1000	mA
Non Repetitive Forward Current t≤100μs t≤10ms	I_{FSM}	6.75 3	A A
Power Dissipation at T_{amb}= 25° C	P_{tot}	330	mW
Storage Temperature Range	T_{stg}	-55 to + 150	° C
Junction Temperature	T_j	125	° C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25° C unless otherwise stated).

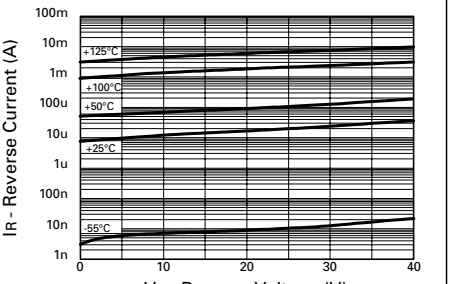
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Reverse Breakdown Voltage	$V_{(BR)R}$	40	60		V	I_R= 200μA
Forward Voltage	V_F		270 300 370 465 550 640 810 440	300 350 460 550 670 780 1050	mV mV mV mV mV mV mV mV	I_F= 50mA* I_F= 100mA* I_F= 250mA* I_F= 500mA* I_F= 750mA* I_F= 1000mA* I_F= 1500mA* I_F= 500mA, T_{amb}= 100° C*
Reverse Current	I_R		15	40	μA	V_R= 30V
Diode Capacitance	C_D		20		pF	f= 1MHz, V_R= 25V
Reverse Recovery Time	t_{rr}		10		ns	switched from I_F = 500mA to I_R = 500mA Measured at I_R = 50mA

*Measured under pulsed conditions. Pulse width= 300μs; duty cycle ≤2%.

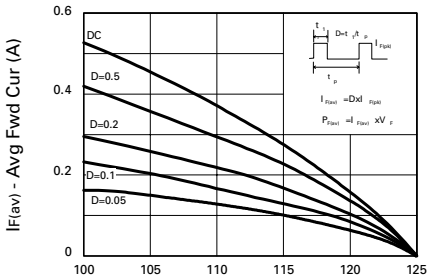
TYPICAL CHARACTERISTICS



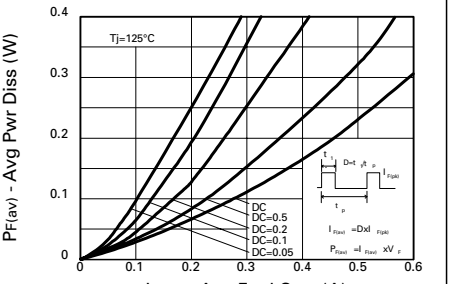
IF v VF



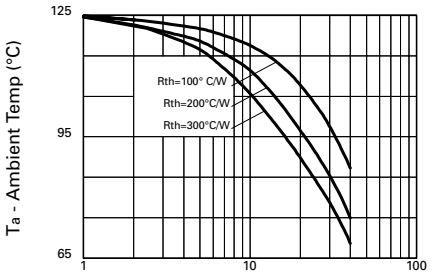
IR v VR



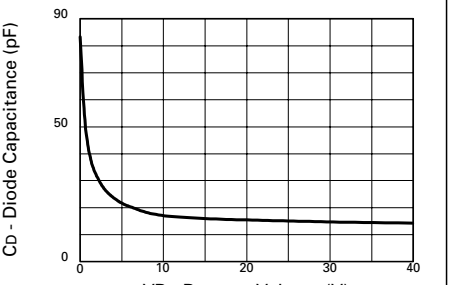
IF(av) v TC



PF(av) v IF(av)



Ta v VR



CD v VR

TYPICAL CHARACTERISTICS