SOD323 SILICON HIGH CURRENT SCHOTTKY BARRIER DIODE “SuperBAT”

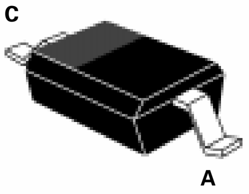
ZHCS400

ISSUE 1- NOVEMBER 1998 ✪

FEATURES:
- Low V_F
- High Current Capability
- Miniature Surface Mount Package

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

Partmark Detail - BD



SOD323

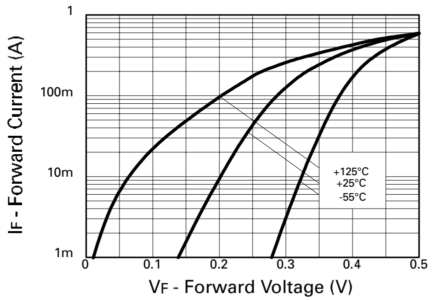
ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Continuous Reverse Voltage	V_R	40	V
Forward Current (Continuous)	I_F	400	mA
Forward Voltage @ I_F =400mA	V_F	500	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}	250	mW
Storage Temperature Range	T_{stg}	-55 to +150	°C
Junction Temperature	T_j	125	°C

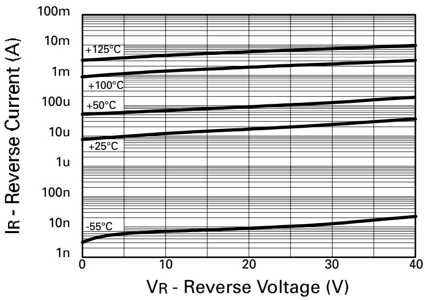
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Reverse Breakdown Voltage	$V_{(BR)R}$	40	60		V	I_R=200µA
Forward Voltage	V_F		270 300 370 425 550 640 810 440	300 350 460 500 670 780 1050	mV mV mV mV mV mV mV mV	I_F=50mA* I_F=100mA* I_F=250mA* I_F=400mA* 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

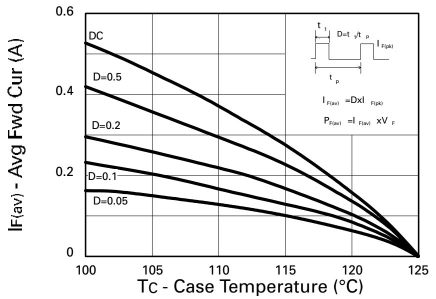
TYPICAL CHARACTERISTICS



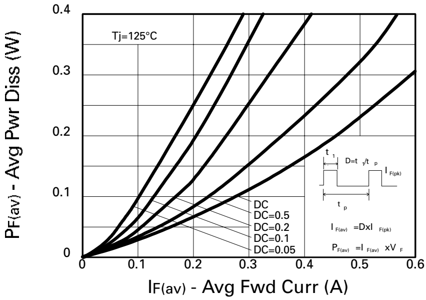
I_F v V_F



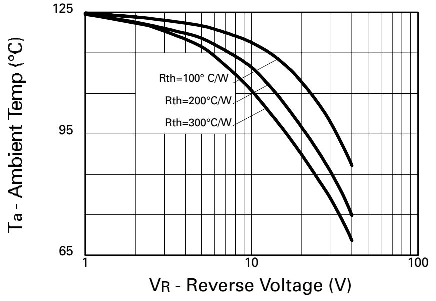
I_R v V_R



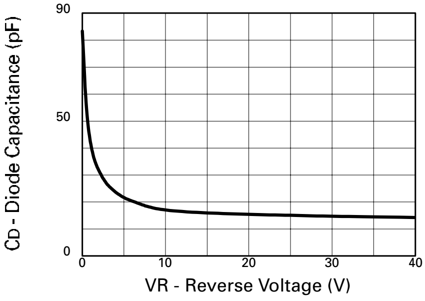
$I_{F(av)}$ v T_C



$P_{F(av)}$ v $I_{F(av)}$

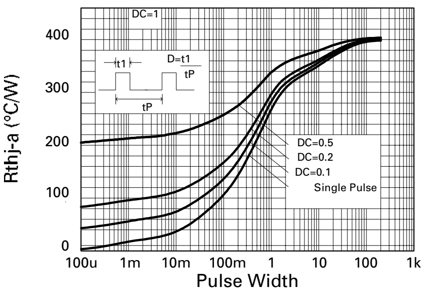


T_a v V_R



C_D v V_R

TYPICAL CHARACTERISTICS



Transient Thermal Resistance