SOT23 SILICON HIGH CURRENT SCHOTTKY BARRIER DIODE "SuperBAT"

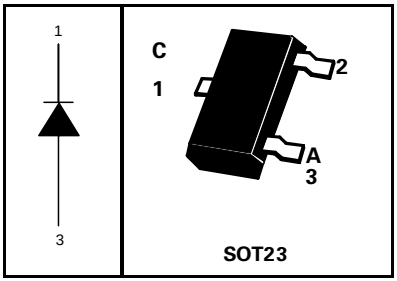
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ISSUE 1- NOVEMBER 1997 ✪

FEATURES:
- Low V_F
- High Current Capability

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

PARTMARK DETAIL: S76



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Continuous Reverse Voltage	V_R	60	V
Forward Current (Continuous)	I_F	750	mA
Forward Voltage @ I_F = 750mA	V_F	610	mV
Average Peak Forward Current; D.C. = 50%	I_{FAV}	1500	mA
Non Repetitive Forward Current t≤100µs t≤10ms	I_{FSM}	12 5	A A
Power Dissipation at T_{amb}= 25° C	P_{tot}	500	mW
Storage Temperature Range	T_{stg}	-55 to + 150	° C
Junction Temperature	T_j	125	° C

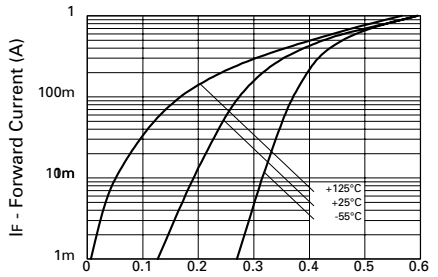
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25° C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Reverse Breakdown Voltage	$V_{(BR)R}$	60	80		V	I_R= 300µA
Forward Voltage	V_F		250 285 350 440 520 600 760	290 330 410 500 610 700 900	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*
Reverse Current	I_R		50	100	µA	V_R= 45V
Diode Capacitance	C_D		17		pF	f= 1MHz, V_R= 25V
Reverse Recovery Time	t_{rr}		12		ns	switched from I_F = 500mA to I_R = 500mA Measured at I_R = 50mA

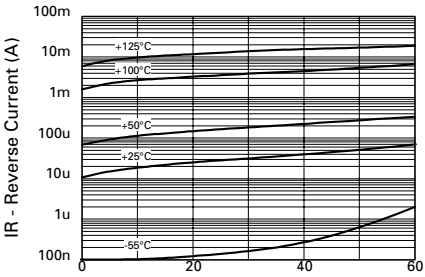
*Measured under pulsed conditions. Pulse width= 300µs; duty cycle ≤2%.

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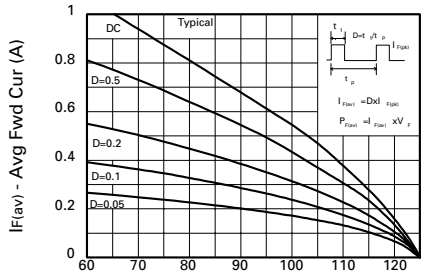
TYPICAL CHARACTERISTICS



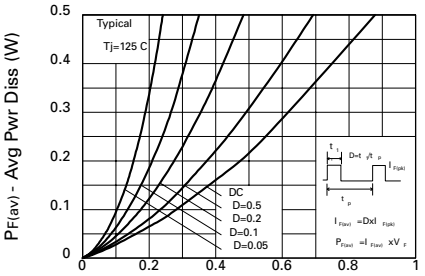
IF v VF



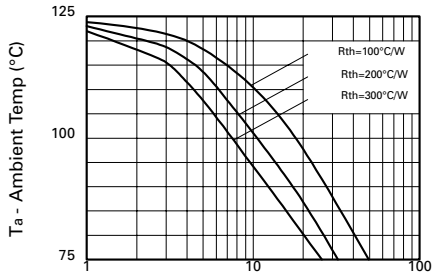
IR v VR



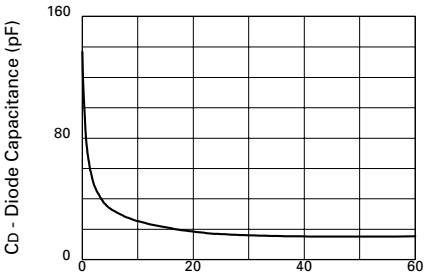
IF(av) v TC



PF(av) v IF(av)

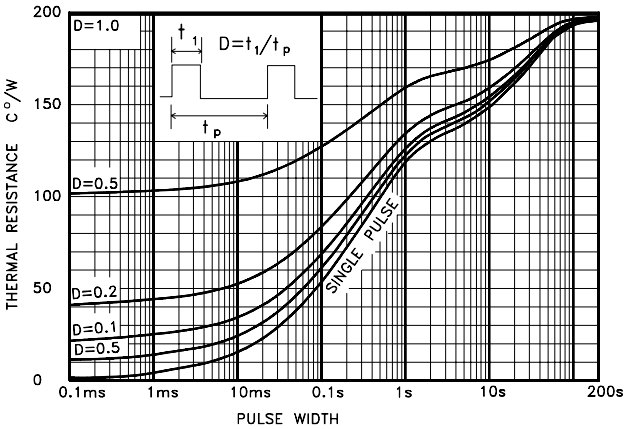


Ta v VR



CD v VR

TYPICAL CHARACTERISTICS



MAXIMUM TRANSIENT THERMAL RESISTANCE

* Reference above figure, devices were mounted on a 15mmx15mm ceramic substrate.