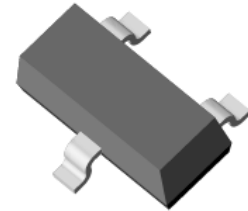


Schottky Barrier Rectifier

General Description

These Schottky barrier diodes are designed for high-speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction losses. Miniature surface mount package is excellent for hand-held and portable applications where space is limited.



SOT-23



Features and Benefits

- Low forward drop voltage and low leakage current
- Very low switching time
- Full lead (Pb)-free device and RoHS compliant device
- Available in “Green” device

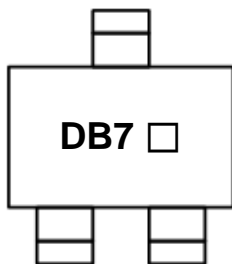
Applications

- General purpose and high speed switching
- Protection circuit and voltage clamping

Ordering Information

Part Number	Marking Code	Package	Packaging
SDB0740	DB7 □	SOT-23	Tape & Reel

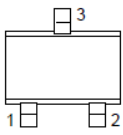
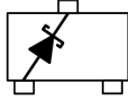
Marking Information



DB7 = Specific Device Code

□ = Year & Week Code Marking

Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Anode		
2	Not Connected		
3	Cathode		

Absolute Maximum Ratings (T_{amb}=25°C, Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Maximum repetitive reverse voltage Maximum working peak reverse voltage Maximum DC blocking voltage	V _{RRM} V _{RWM} V _R	40	V
Average forward rectified current	I _{F(AV)}	0.75	A
Non-repetitive peak forward surge current(t=8.3ms)	I _{FSM}	5.5	A
Power dissipation ¹⁾	P _D	350	mW

¹⁾ Device mounted on FR-4 board with recommended pad layout.

Thermal Characteristics (T_{amb}=25°C, Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Thermal resistance, junction to ambient ¹⁾	R _{th(j-a)}	350	°C/W
Operating junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-55 ~ 150	°C

¹⁾ Device mounted on FR-4 board with recommended pad layout.

Electrical Characteristics (T_{amb}=25°C, Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage drop ²⁾	V _{F(1)}	I _F =750mA	-	-	490	mV
Reverse leakage current ³⁾	I _{R(1)}	V _R =30V	-	-	100	μA
	I _{R(2)}	V _R =40V	-	-	250	μA
Total capacitance	C _T	V _R =0V, f=1MHz	-	230	-	pF
Reverse recovery time	t _{rr}	I _F = I _R =100mA, I _{rr} = 10mA	-	-	10	ns

²⁾ Pulse test: t_p≤380μs, Duty cycle≤2%

³⁾ Pulse test: t_p≤5ms, Duty cycle≤2%

Rating and Characteristic Curves

Fig. 1) Typical Forward Characteristics

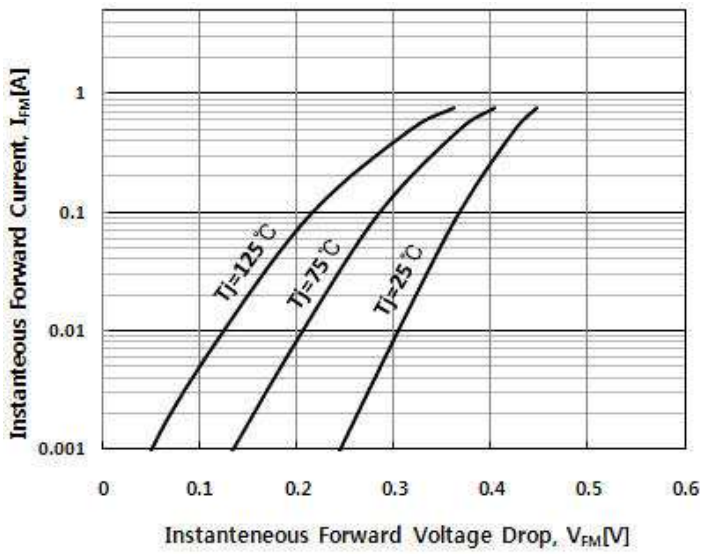


Fig. 2) Typical Reverse Characteristics

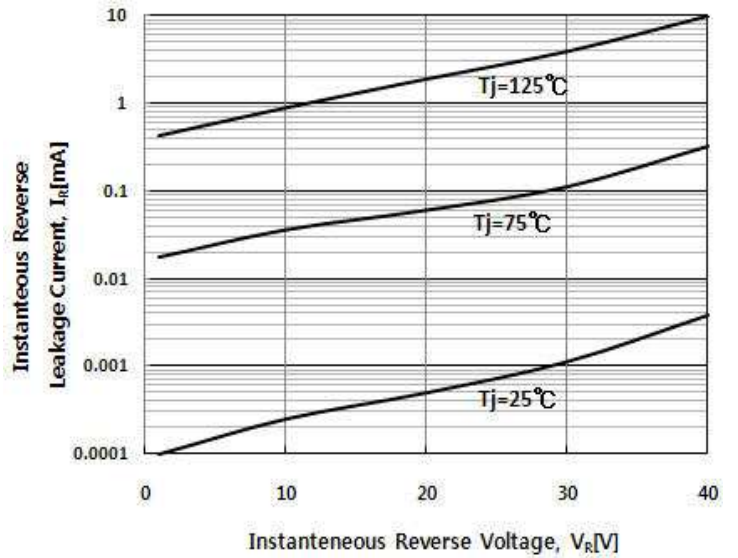
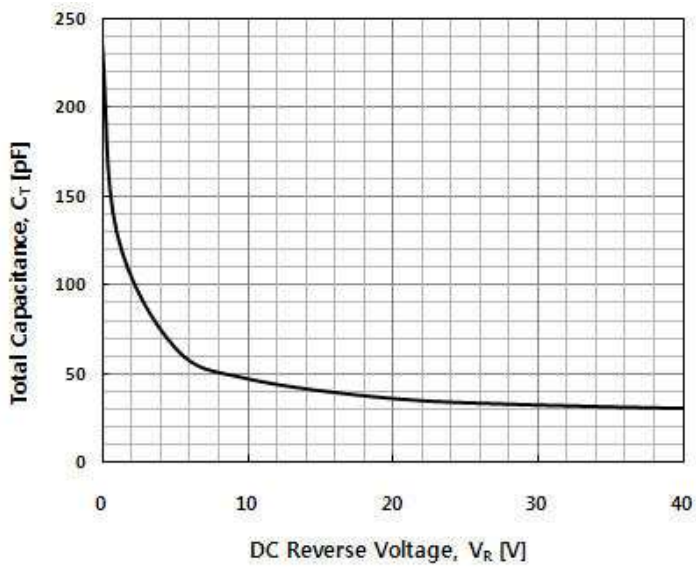


Fig. 3) Typical Junction Capacitance



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