

SCHOTTKY BARRIER DIODE

Features

- Low forward current
- Guard ring protected
- Low diode capacitance.

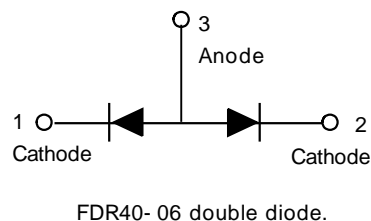
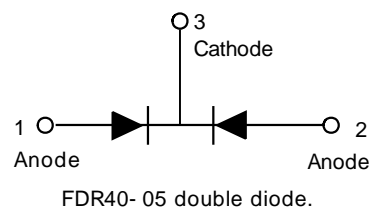
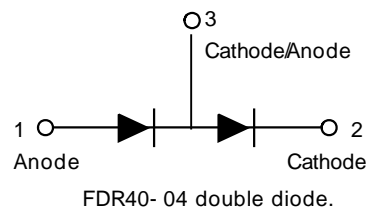
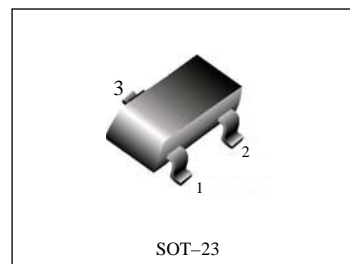
APPLICATIONS

- Ultra high- speed switching
- Voltage clamping
- Protection circuits.
- Blocking diodes.

DESCRIPTION

Planar Schottky barrier diodes with an integrated guard ring for stress protection.

We declare that the material of product compliance with RoHS requirements.



ORDERING INFORMATION

Device	Marking	Shipping
FDR40	B1	3000 Tape & Reel
FDR40- 04	CB	3000 Tape & Reel
FDR40- 05	45	3000 Tape & Reel
FDR40- 06	L2	3000 Tape & Reel

MAXIMUM RATINGS (T_A = 25 °C)

Parameter	Symbol	Min.	Max.	Unit	Conditions
Continuous reverse voltage	V _R	-	40	V	
Continuous forward current	I _F	-	120	mA	
Repetitive Peak forward surge current	I _{FSM}	-	120	mA	t _p <1s;δ<0.5
Non-repetitive peak forward current	I _{FSM}	-	200	mA	t _p <10ms
Storage temperature	T _{stg}	-65	+150	°C	
Junction temperature	T _j	-	150	°C	
Operating ambient temperature	T _{amb}	-65	+150	°C	

DEVICE MARKING

FDR40 = B1 FDR40-04 = CB FDR40-05 = 45 FDR40-06 = L2

ELECTRICAL CHARACTERISTICS(T_A= 25 °C)

Parameter	Symbol	Max.	Unit	Conditions
Forward voltage(Fig.1)	V _F	400	mV	I _F =1mA
		560	mv	I _F =10mA
		1	v	I _F =40mA
Reverse current(Fig.2.note1)	I _R	1	μA	V _R =30V
		10	μA	V _R =40V
Diode capacitance(Fig.4)	C _d	5	pF	f=1MHz;V _R =0

Note:

1. Pulse test:t_p=300μs;δ=0.02.

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT	CONDITIONS
Thermal resistance from junction to ambient	R _{th j-a}	500	k/w	note1

Note

1. Refer to SOT23 or SOT143B standard mounting conditions.

Electrical characteristic curves ($T_A = 25^\circ\text{C}$)

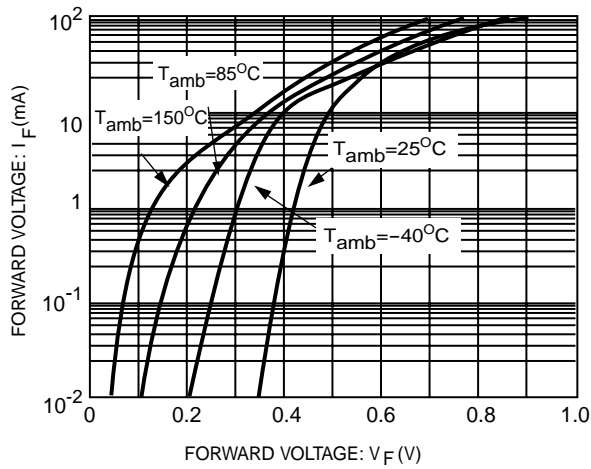


Fig.1 Forward current as a function of forward voltage; typical values.

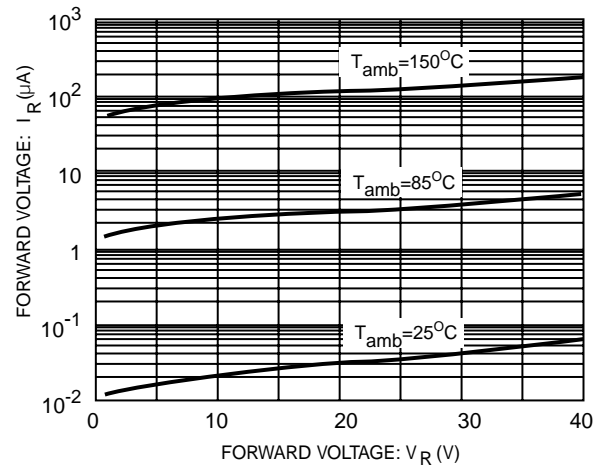


Fig.2 Reverse current as a function of reverse voltage; typical values.

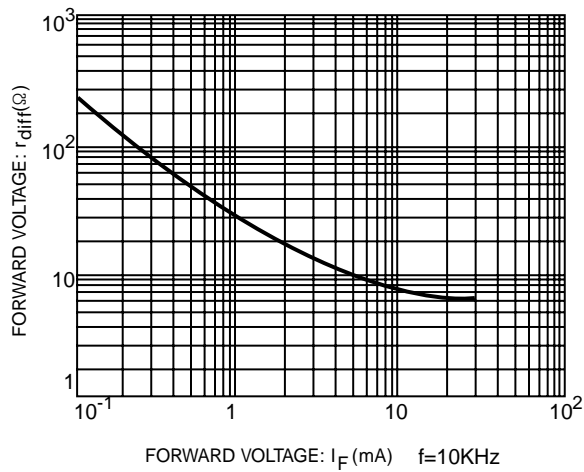


Fig.3 Differential forward resistance as a function of forward current; typical values.

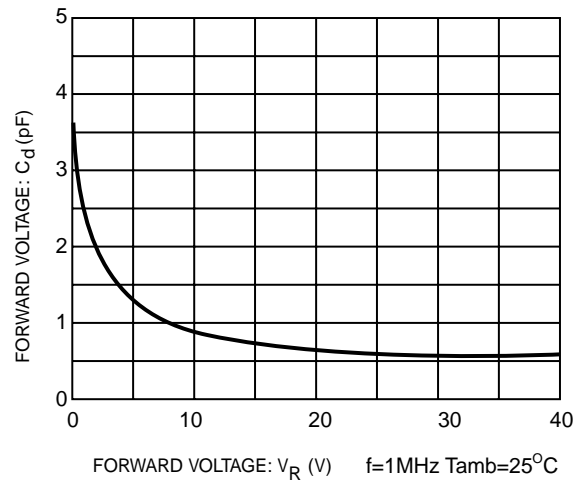
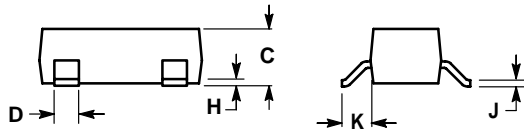
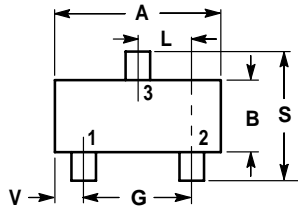


Fig.4 Diode capacitance as a function of reverse voltage; typical values.

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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

