Schottky Barrier Diode

Features

1. High reliability
2. Low reverse current and low forward voltage

Applications

Low current rectification and high speed switching

Construction

Silicon epitaxial planar

Absolute Maximum Ratings

T_j=25℃

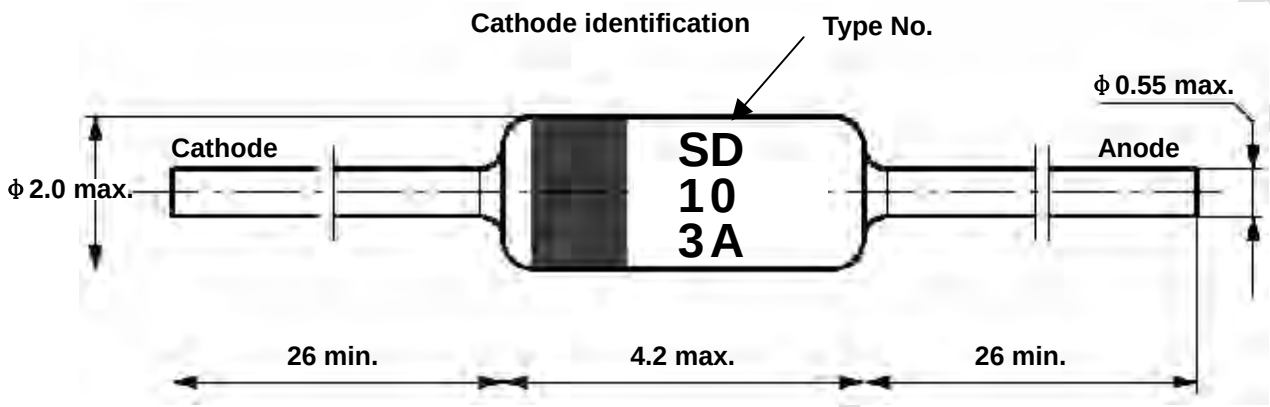
Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage		SD103A	V_{RRM}	40	V
		SD103B	V_{RRM}	30	V
		SD103C	V_{RRM}	20	V
Repetitive peak forward current	t_p≦1 s		I_{FRM}	1	A
Forward current			I_{FM}	350	mA
Power dissipation	T_{amb}=25℃		P_V	400	mW
Storage temperature range			T_{stg}	-65~+175	℃

Maximum Thermal Resistance

T_j=25℃

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	R_{thJA}	250	K/W

Dimensions in mm



Standard Glass Case
JEDEC DO 35

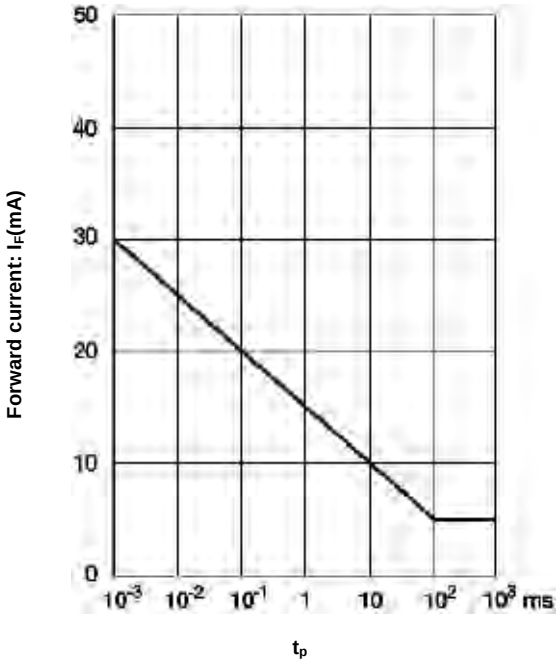


Figure 3. Typical non repetitive forward surge current vs. pulse width

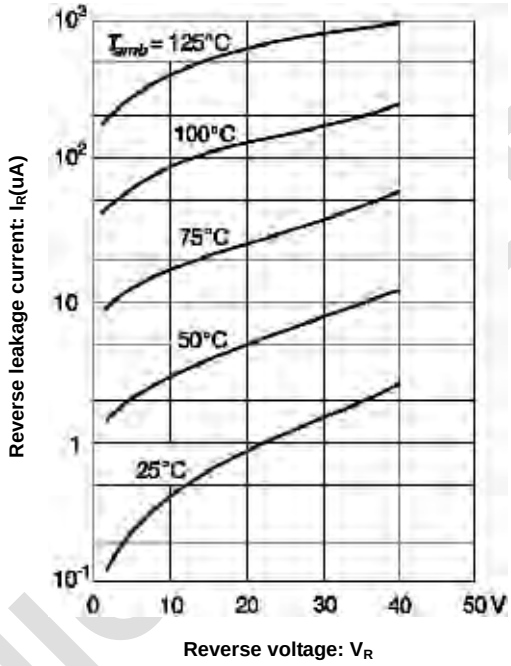


Figure 4. Typical variation of reverse current at various temperatures

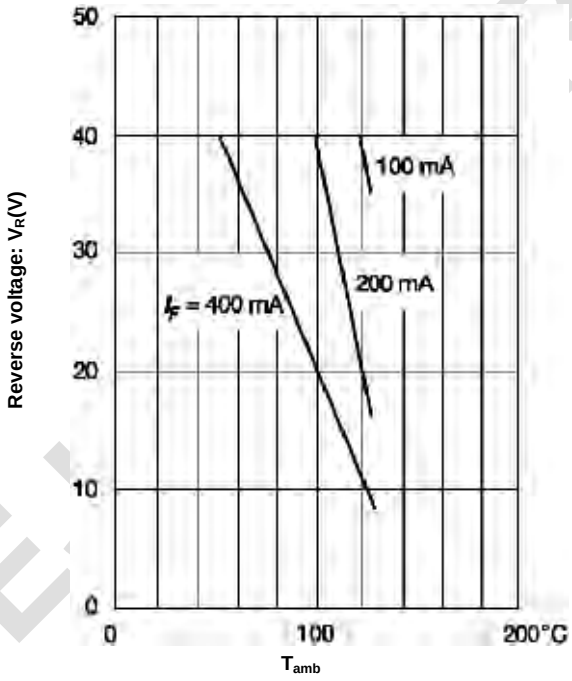


Figure 5. Blocking voltage duration vs. temperature at various average forward current

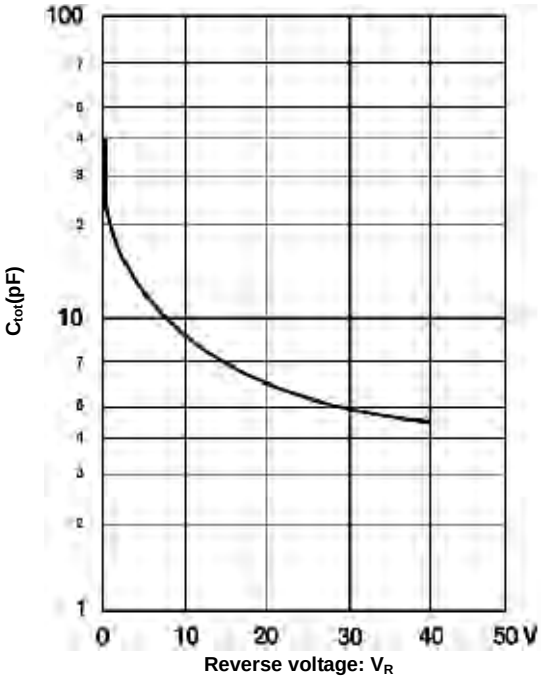


Figure 6. Typical capacitance vs. reverse voltage

Electrical Characteristics

T_j=25℃

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=20mA		V_F			0.37	V
	I_F=200mA		V_F			0.6	V
Reverse current	V_R=30V	SD103A	I_R			5	μA
	V_R=20V	SD103B	I_R			5	μA
	V_R=10V	SD103C	I_R			5	μA
Diode capacitance	V_R=V_F=0, f=1MHz		C_D		50		pF
Reverse recovery time	I_F= I_R=200mA to 0.1mA I_R		t_{rr}		10		ns

Characteristics (T_j=25℃ unless otherwise specified)

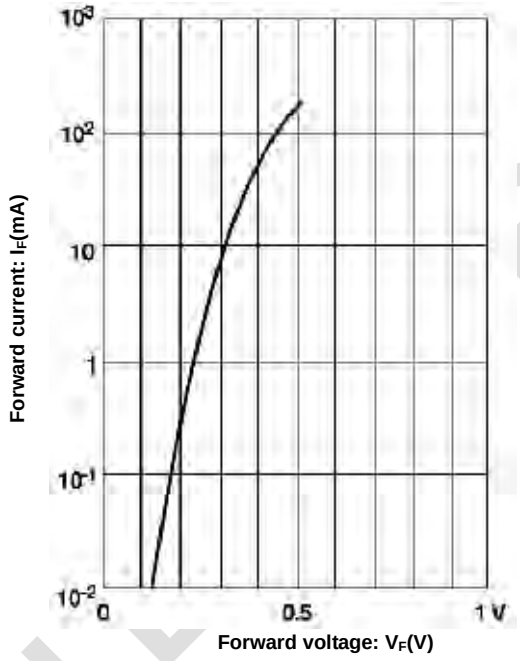


Figure 1. Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier

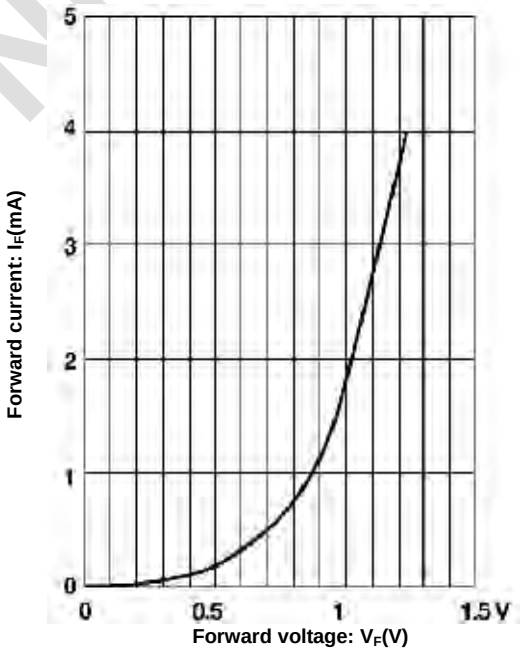


Figure 2. Typical high current forward conduction curve t_p=300ms, duty cycle=2%