



Micro Commercial Components

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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

SD103A THRU SD103C

Small Signal Schottky Diodes

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Low Reverse Recovery Time
- Low Reverse Capacitance
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection

Mechanical Data

- Case: DO-35, Glass
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Indicated by Cathode Band
- Moisture Sensitivity: Level 1 per J-STD-020C

Maximum Ratings @25°C Unless Otherwise Specified

Characteristic	Symbol	SD103A	SD103B	SD103C
Peak Repetitive Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}	40V	30V	20V
DC Blocking Voltage	V_R			
RMS Reverse Voltage	$V_{R(RMS)}$	28V	21V	14V
Maximum single cycle surge 60Hz sine wave	I_{FSM}	15A		
Power Dissipation (Note 2)	P_d	400mW		
Thermal Resistance, Junction to Ambient	R	300K/W		
Junction Temperature	T_j	125°C		
Operation/Storage Temp. Range	T_{STG}	-55 to +150°C		

DO-35

DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

Electrical Characteristics @25°C Unless Otherwise Specified

Parameter	Symbol	Type	Max	Test Condition
SD103A Leakage Current	I_R	-----	5.0uA	$V_R=30V$
SD103B Leakage Current	I_R	-----	5.0uA	$V_R=20V$
SD103C Leakage Current	I_R	-----	5.0uA	$V_R=10V$
Maximum Forward Voltage Drop	V_{FM}	-----	0.37V 0.60V	$I_F=20mA$ $I_F=200mA$
Junction Capacitance	C_j	50pF	-----	$V_R=0V, f=1.0MHz$
Reverse Recovery Time	t_{rr}	10ns	-----	$I_F=I_R=50mA, \text{recover to } 200mA/0.1I_R$

- Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.
2. Valid provided that electrodes are kept at ambient temperature

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

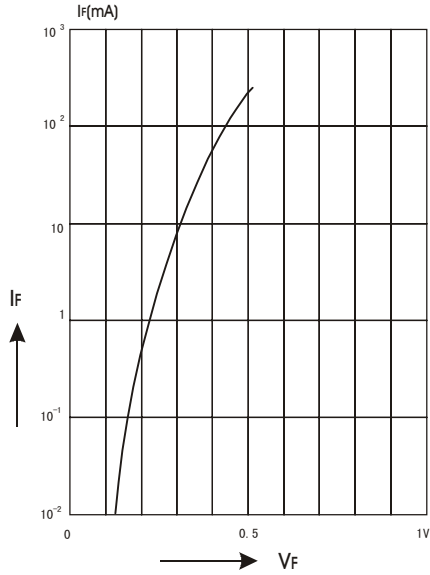


Figure 2. Typical high current forward conduction curve $t_p=300\text{ms}$, duty cycle=2%

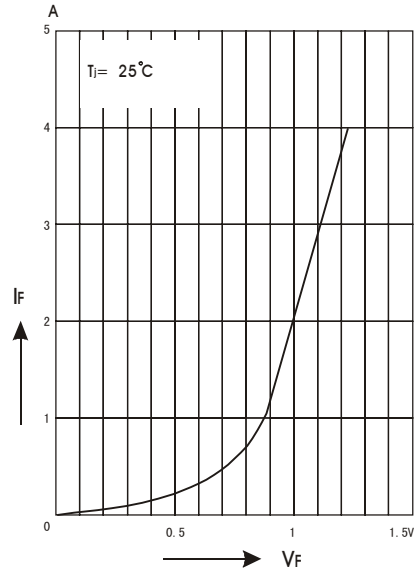


Figure 3. Typical non repetitive forward surge current versus pulse width

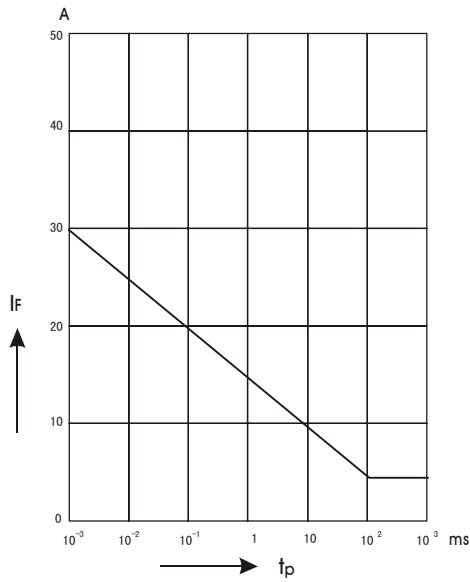


Figure 4. Typical variation of reverse current at various temperatures

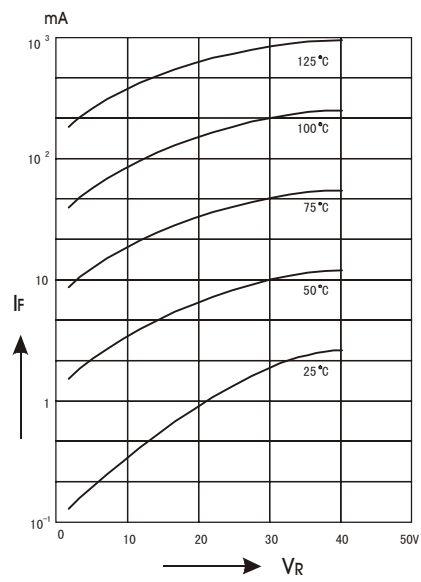


Figure 5. Blocking deration versus temperature at various average forward currents

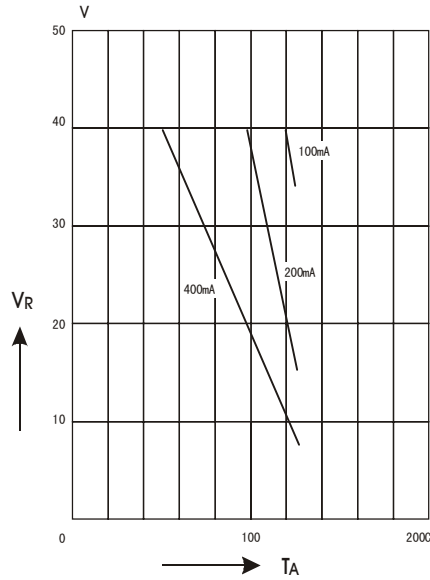
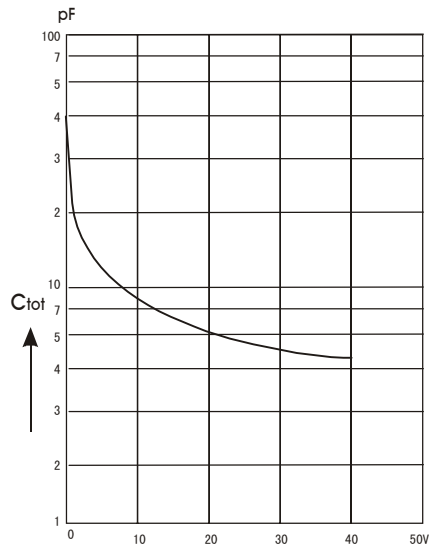


Figure 6. Typical capacitance versus reverse voltage





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Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel; 10Kpcs/Reel
(Part Number)-AP	Ammo Packing;5Kpcs/AmmoBox
(Part Number)-BP	Bulk;500pcs/Bag

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