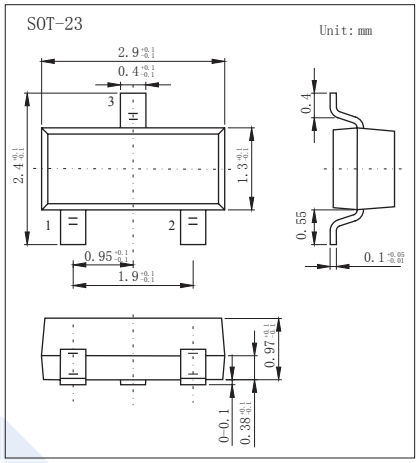
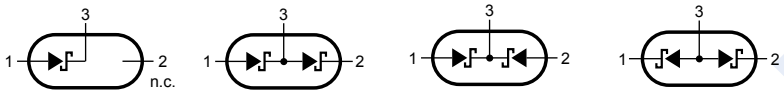
Schottky Diodes

1PS59SB1 series



■ Features

- Low forward voltage
- Guard ring protected
- Small SMD package.



1PS59SB10 1PS59SB14 1PS59SB15 1PS59SB16

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_{RM}	30	V
Forward Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	
Non-Repetitive Peak Forward Surge Current	I_{FSM}	600	
Power Dissipation	P_d	250	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	℃/W
Junction Temperature	T_J	125	℃
Storage Temperature range	T_{stg}	-65 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	I_R= 100 uA	30			V
Forward voltage	V_F	I_F= 0.1 mA			0.24	
		I_F= 1 mA			0.32	
		I_F= 10 mA			0.4	
		I_F= 30 mA			0.5	
		I_F= 100 mA			0.8	
Reverse voltage leakage current	I_R	V_R= 25 V			2	uA
Junction capacitance	C_j	V_R= 1 V, f= 1 MHz			10	pF
Reverse recovery time	t_{rr}	I_F=I_R=10mA,Irr=0.1xI_R, R_L=100Ω			5	ns

■ Marking

NO	1PS59SB10	1PS59SB14	1PS59SB15	1PS59SB16
Marking	10	14	15	16

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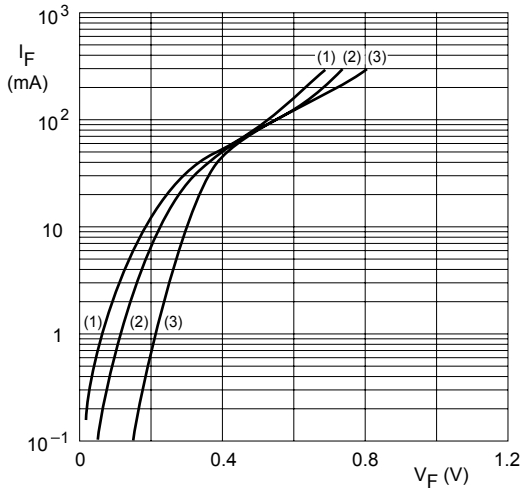
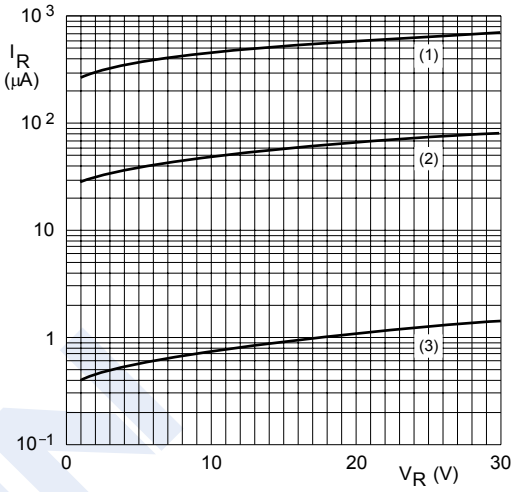
■ Typical Characterisitics



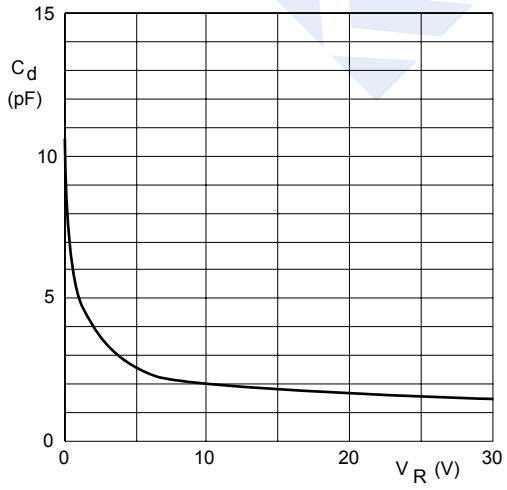
(1) T_{amb} = 125 °C.
(2) T_{amb} = 85 °C.
(3) T_{amb} = 25 °C.

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



(1) T_{amb} = 125 °C.
(2) T_{amb} = 85 °C.
(3) T_{amb} = 25 °C.

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



f = 1 MHz; T_{amb} = 25 °C.

Fig.3 Diode capacitance as a function of reverse voltage; typical values.

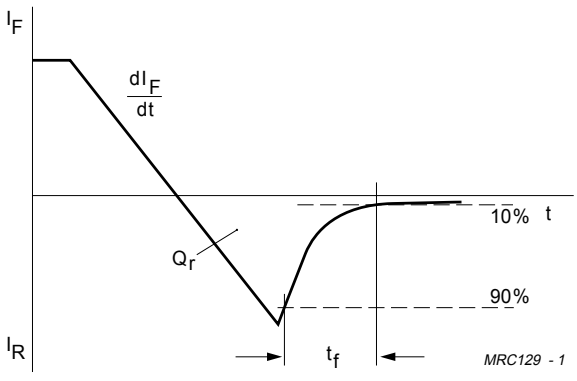


Fig.4 Reverse recovery definitions.