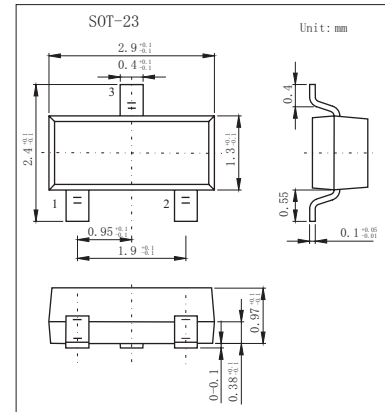
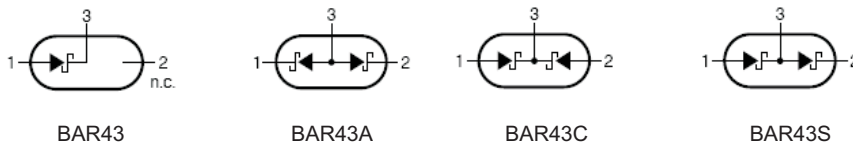


## Schottky Diodes

### BAR43/A/C/S(KAR43/A/C/S)

#### ■ Features

- Low forward voltage
- Fast switching



#### ■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Continuous Forward Current	$I_F$	100	mA
Surge Non-repetitive Forward Current $t_p=10\text{ms}$ Sinusoidal	$I_{FSM}$	750	
Power Dissipation $T_a=25^\circ\text{C}$ (Note1)	$P_{tot}$	250	mW
Thermal Resistance Junction to Ambient (Note2)	$R_{\theta JA}$	400	$^\circ\text{C}/\text{W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-55 to 150	

Notes:

1. For double diodes,  $P_{tot}$  is the total power dissipation of both diodes.
2. Mounted on epoxy board with recommended pad layout.

#### ■ Electrical Characteristics ( $T_j = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_R$	$I_R = 100 \mu\text{A}$	30			V
Forward voltage *	$V_{F1}$	$I_F = 2 \text{ mA}$			0.33	
	$V_{F2}$	$I_F = 15 \text{ mA}$			0.45	
	$V_{F3}$	$I_F = 100 \text{ mA}$			1	
Reverse voltage leakage current **	$I_{R1}$	$V_R = 25 \text{ V}, T_j = 25^\circ\text{C}$			500	nA
	$I_{R2}$	$V_R = 25 \text{ V}, T_j = 100^\circ\text{C}$			100	$\mu\text{A}$
Capacitance between terminals	$C_T$	$V_R = 1 \text{ V}, F = 1 \text{ MHz}$		7		pF
Reverse recovery time	$t_{rr}$	$I_F = 10 \text{ mA}, I_R = 10 \text{ mA}, I_{rr} = 1 \text{ mA}, R_L = 100 \Omega$			5	ns
Detection efficiency.	$\eta$	$R_L = 50 \text{ K}\Omega, C_L = 300 \text{ pF}, F = 45 \text{ MHz}, V_i = 2 \text{ V}$	80			%

Pulse test:  $*t_p=380 \mu\text{s}, \delta < 2\%$

$**t_p=5 \text{ ms}, \delta < 2\%$

#### ■ Marking

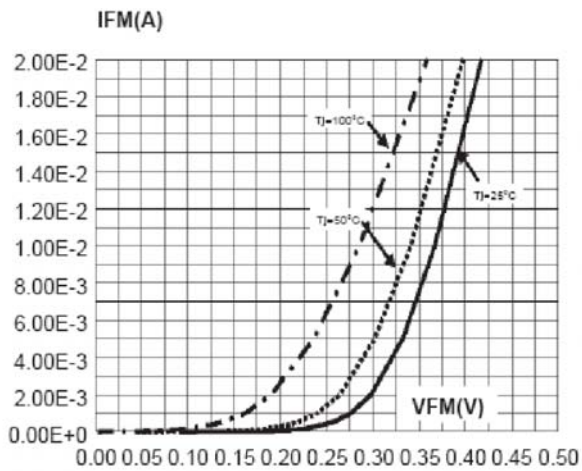
Type	BAR43	BAR43A	BAR43C	BAR43S
Marking	D95	DB1	DB2	DA5

## Schottky Diodes

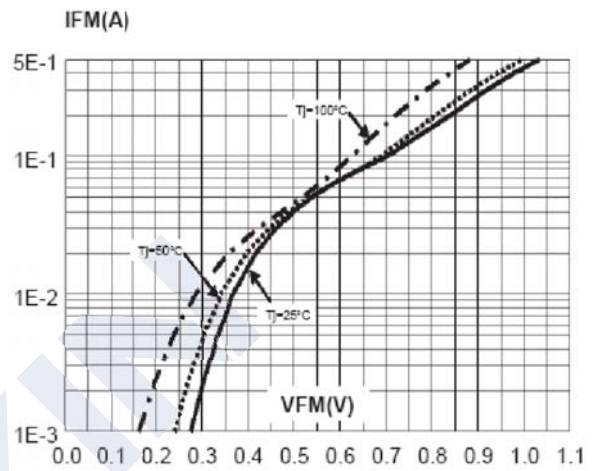
### BAR43/A/C/S(KAR43/A/C/S)

#### ■ Typical Characteristics

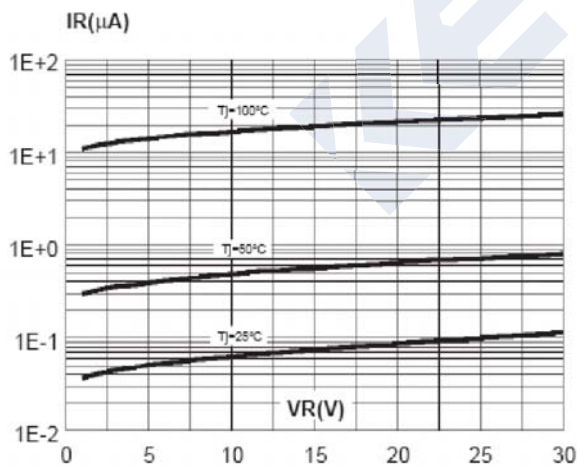
**Fig. 1-1:** Forward voltage drop versus forward current (typical values, low level).



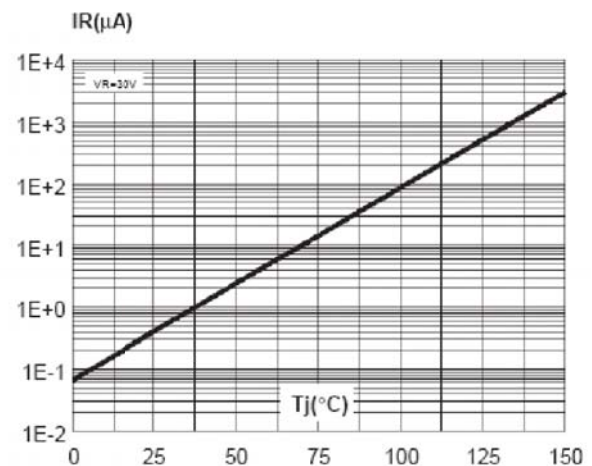
**Fig. 1-2:** Forward voltage drop versus forward current (typical values, high level).



**Fig. 2:** Reverse leakage current versus reverse voltage applied (typical values).



**Fig. 3:** Reverse leakage current versus junction temperature.

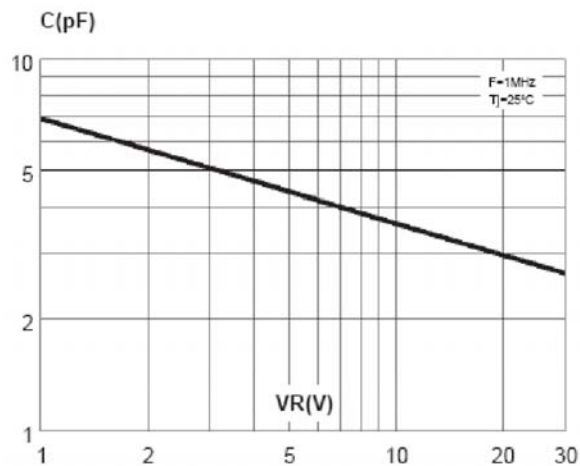


## Schottky Diodes

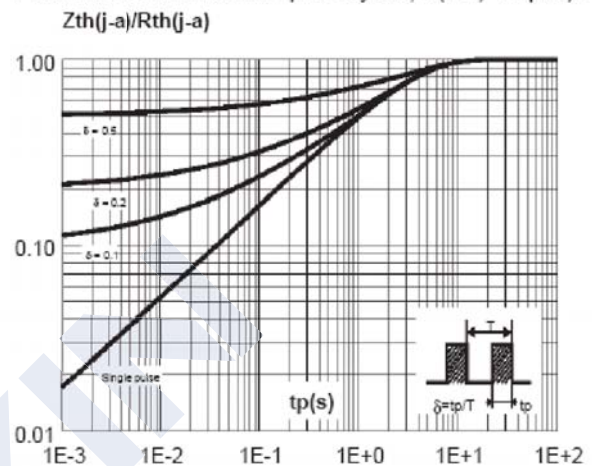
### BAR43/A/C/S(KAR43/A/C/S)

#### ■ Typical Characteristics

**Fig. 4:** Junction capacitance versus reverse voltage applied (typical values).



**Fig. 5:** Relative variation of thermal impedance junction to ambient versus pulse duration (epoxy FR4 with recommended pad layout,  $e(\text{Cu})=35\mu\text{m}$ ).



**Fig. 6:** Thermal resistance junction to ambient versus copper surface under each lead (Epoxy printed circuit board FR4, copper thickness:  $35\mu\text{m}$ ).

