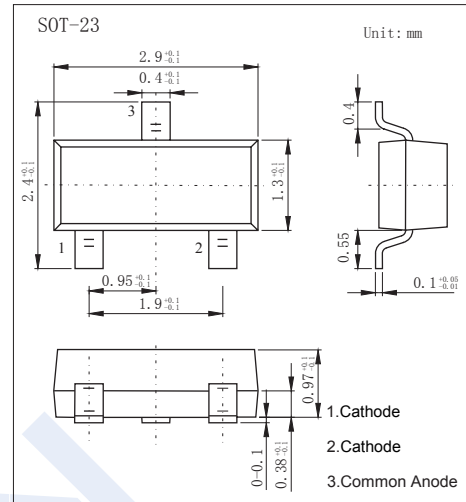
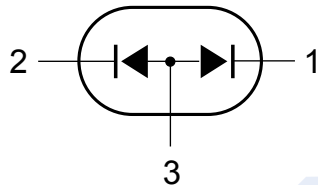


## Switching Diodes

## BAS35 (KAS35)

## ■ Features

- Switching speed: 50 ns
- General application
- Continuous reverse voltage:90V
- Repetitive peak reverse voltage:110V
- Repetitive peak forward current:600mA
- Repetitive peak reverse current:600mA

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	110	V
Continuous Reverse Voltage	$V_R$	90	
Continuous Forward Current	Single Diode	250	mA
	Double Diode	150	
Repetitive Peak Forward Surge Current	$I_{FRM}$	600	
Non-Repetitive Peak Forward Surge Current	$t=1\mu\text{s}$	10	A
	$t=100\mu\text{s}$	4	
	$t=1\text{s}$	0.75	
Repetitive Peak Reverse Current	$I_{RRM}$	600	mA
Repetitive Peak Reverse Energy	$E_{RRM}$	5	mJ
Power Dissipation	$P_D$	250	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Thermal Resistance Junction to Tie Point	$R_{\theta JP}$	360	
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-65 to 150	

## Switching Diodes

## BAS35 (KAS35)

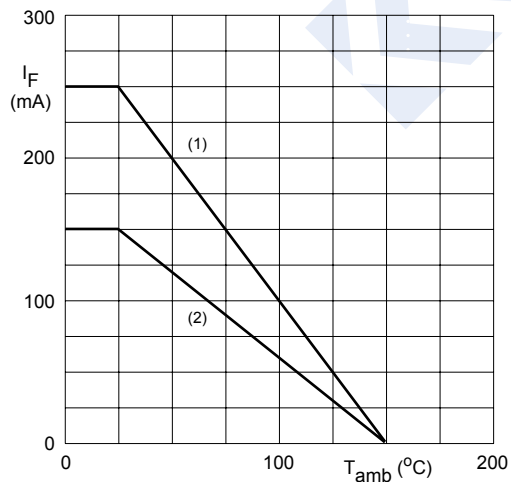
■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_R$	$I_R = 1\text{ mA}$	110			V
Forward voltage	$V_F$	$I_F = 10\text{ mA}$			0.75	
		$I_F = 50\text{ mA}$			0.84	
		$I_F = 100\text{ mA}$			0.9	
		$I_F = 200\text{ mA}$			1	
		$I_F = 400\text{ mA}$			1.25	
Reverse voltage leakage current	$I_R$	$V_R = 90\text{ V}$			0.1	uA
		$V_R = 90\text{ V}, T_J = 150^\circ\text{C}$			100	
Capacitance between terminals	$C_T$	$V_R = 0\text{ V}, f = 1\text{ MHz}$			35	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 30\text{ mA}, R_L = 100\Omega, I_R = 3\text{ mA}$ See Fig.6			50	ns

## ■ Marking

Marking	L22
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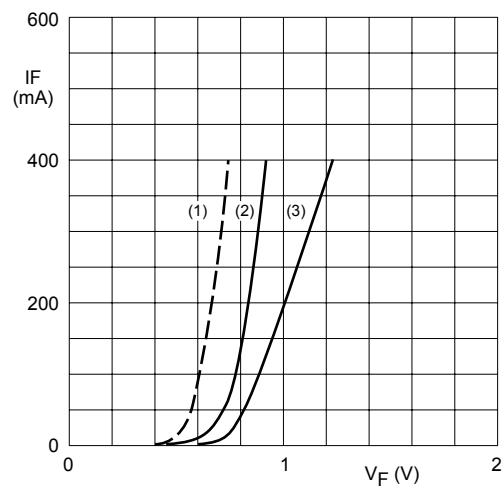
## ■ Typical Characteristics



Device mounted on an FR4 printed-circuit board.

- (1) Single diode loaded.  
(2) Double diode loaded.

Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.



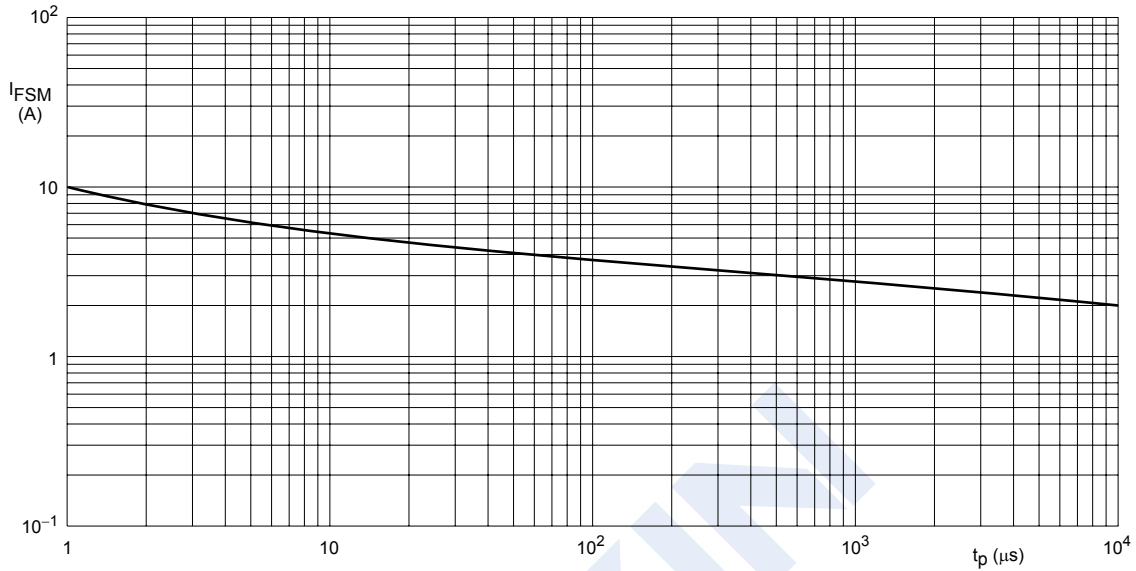
- (1)  $T_j = 150^\circ\text{C}$ ; typical values.  
(2)  $T_j = 25^\circ\text{C}$ ; typical values.  
(3)  $T_j = 25^\circ\text{C}$ ; maximum values.

Fig.2 Forward current as a function of forward voltage.

## Switching Diodes

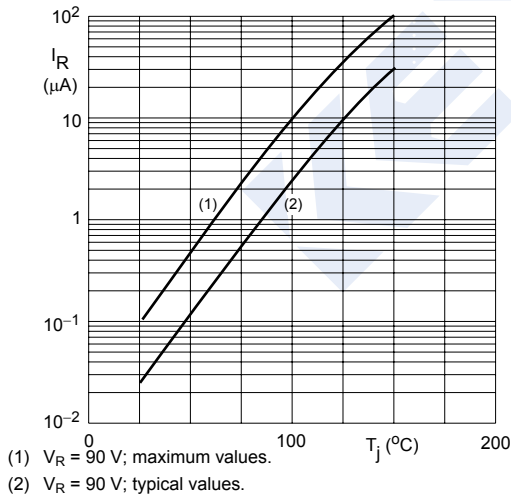
### BAS35 (KAS35)

■ Typical Characteristics



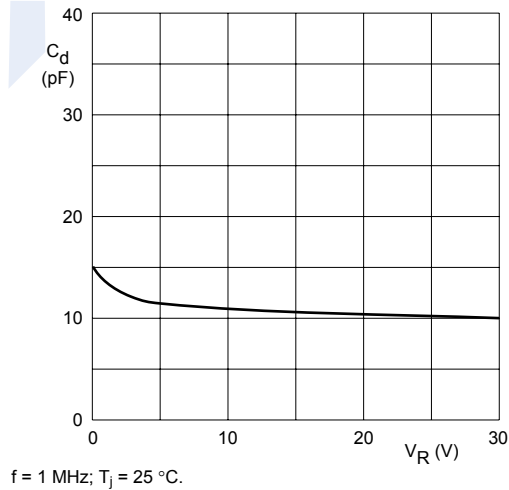
Based on square wave currents.  
 $T_j = 25^\circ\text{C}$  prior to surge.

Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



(1)  $V_R = 90\text{ V}$ ; maximum values.  
 (2)  $V_R = 90\text{ V}$ ; typical values.

Fig.4 Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$ ;  $T_j = 25^\circ\text{C}$ .

Fig.5 Diode capacitance as a function of reverse voltage; typical values.

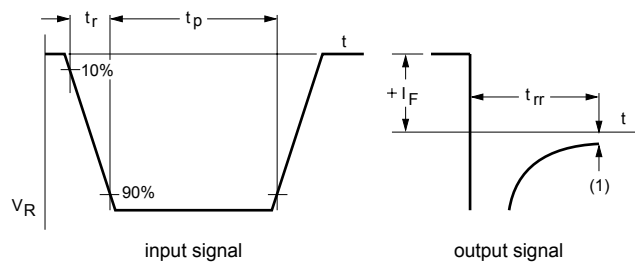
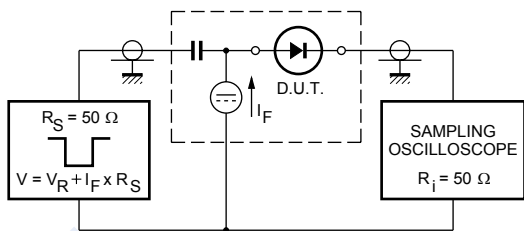


Fig.6 Reverse recovery voltage test circuit and waveforms.