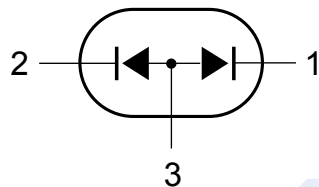
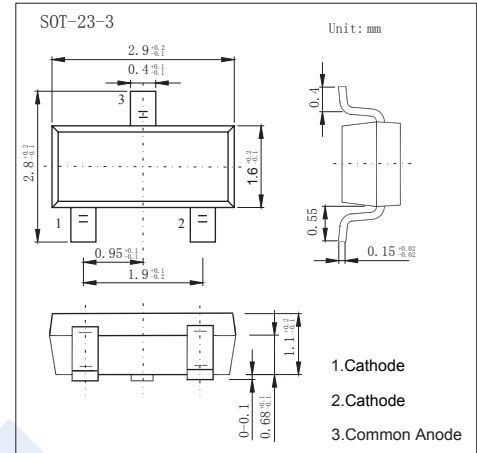


Switching Diodes

BAS35-HF (KAS35-HF)

■ 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
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish

■ 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	$^\circ\text{C}/\text{W}$
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-HF (KAS35-HF)

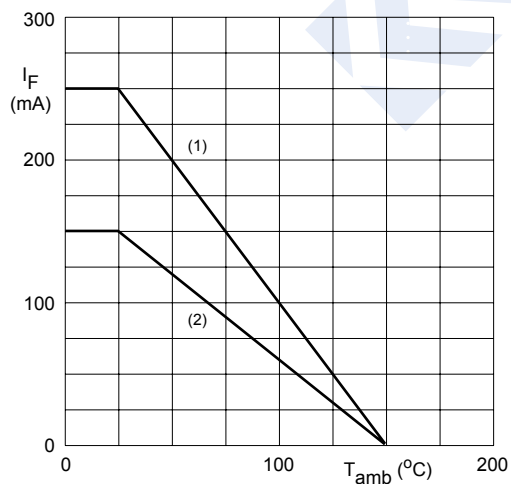
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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 ϵ
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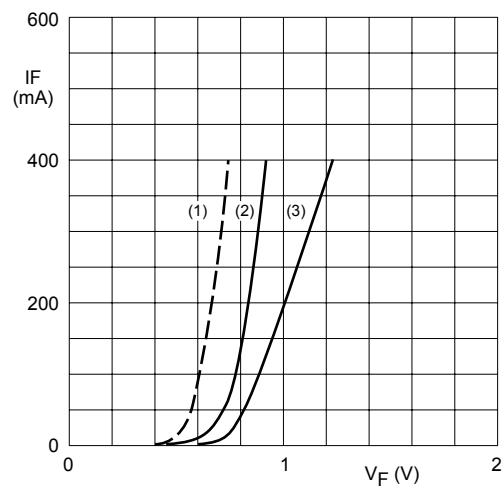
■ Typical Characteristics



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.



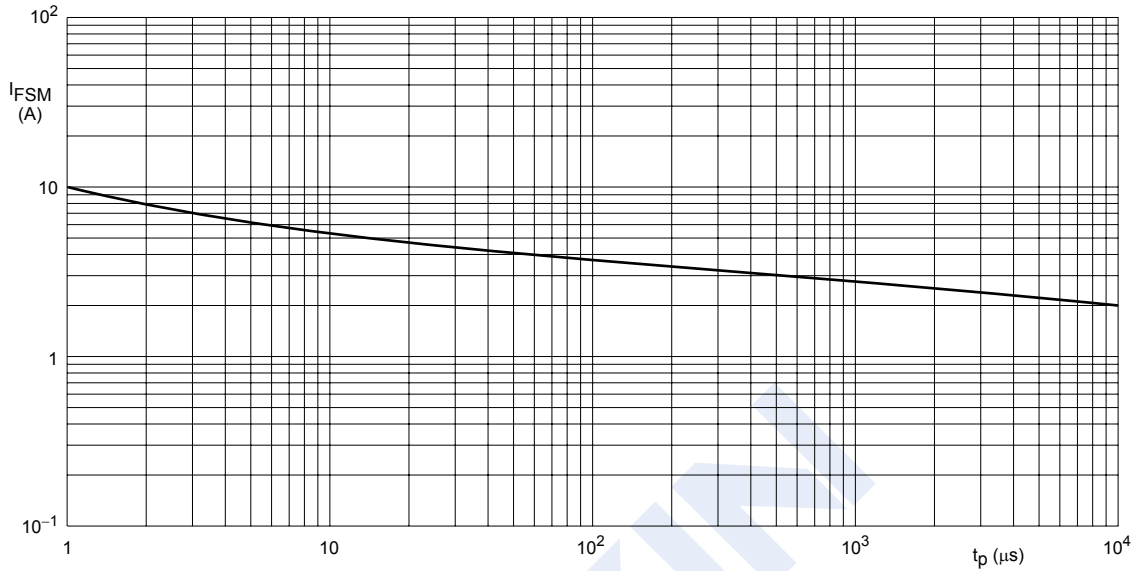
- (1) $T_j = 150^\circ\text{C}$; typical values.
(2) $T_j = 25^\circ\text{C}$; typical values.
(3) $T_j = 25^\circ\text{C}$; maximum values.

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

Switching Diodes

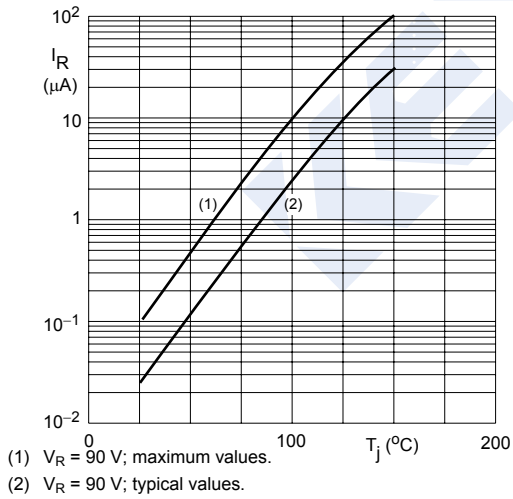
BAS35-HF (KAS35-HF)

Typical Characteristics



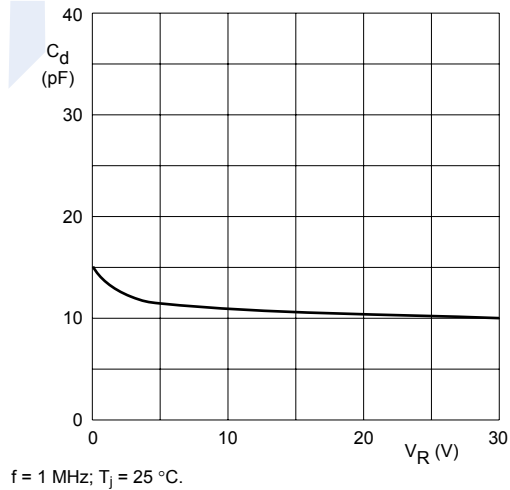
Based on square wave currents.
 $T_j = 25^\circ\text{C}$ prior to surge.

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.

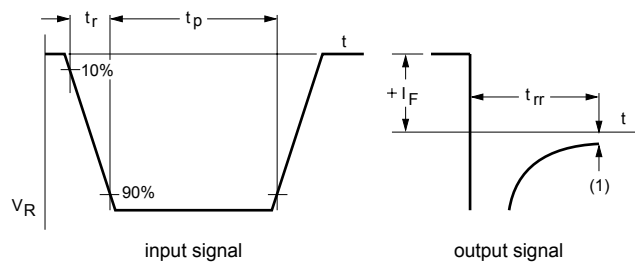
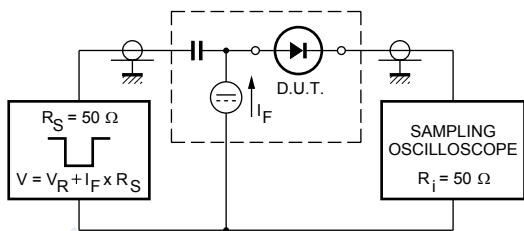


Fig.6 Reverse recovery voltage test circuit and waveforms.