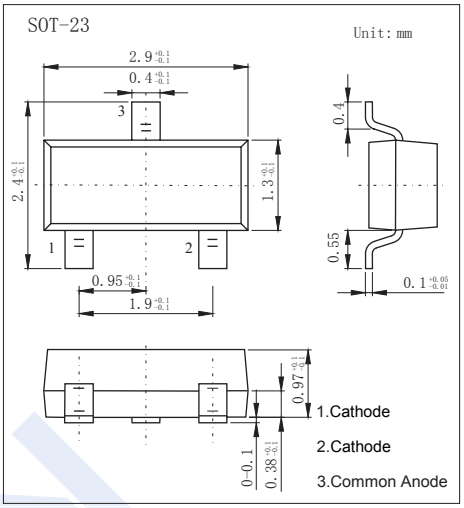
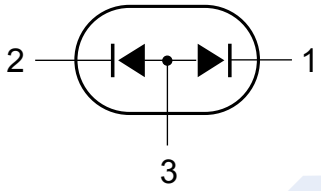
Switching Diodes

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 Ta = 25℃

Parameter		Symbol	Rating	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	110	V
Continuous Reverse Voltage		V_R	90	
Continuous Forward Current	Single Diode	I_F	250	mA
	Double Diode		150	
Repetitive Peak Forward Surge Current		I_{FRM}	600	
Non-Repetitive Peak Forward Surge Current	t=1us	I_{FSM}	10	A
	t=100us		4	
	t=1s		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	℃/W
Thermal Resistance Junction to Tie Point		$R_{\theta JP}$	360	
Junction Temperature		T_J	150	℃
Storage Temperature range		T_{stg}	-65 to 150	

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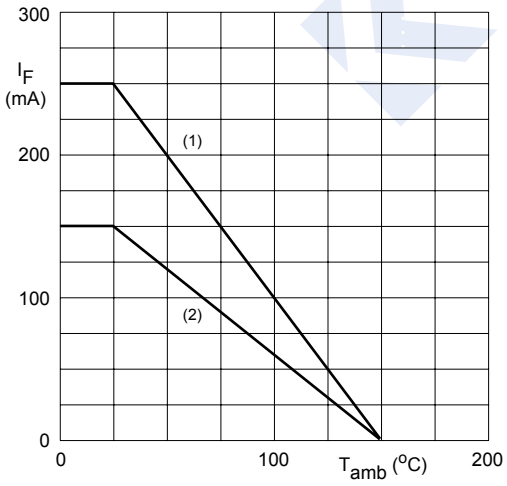
■ Electrical Characteristics Ta = 25℃

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

■ Marking

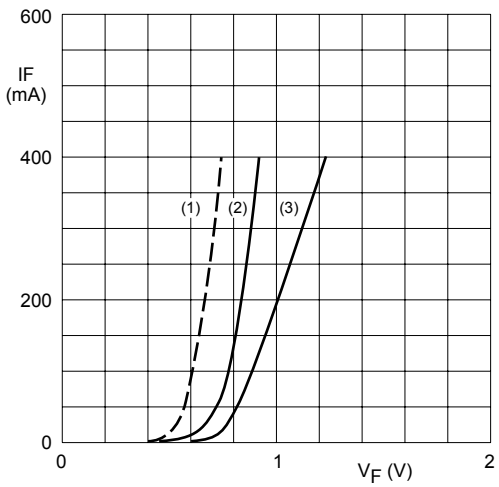
Marking	L22 F

■ Typical Characterisitics



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.



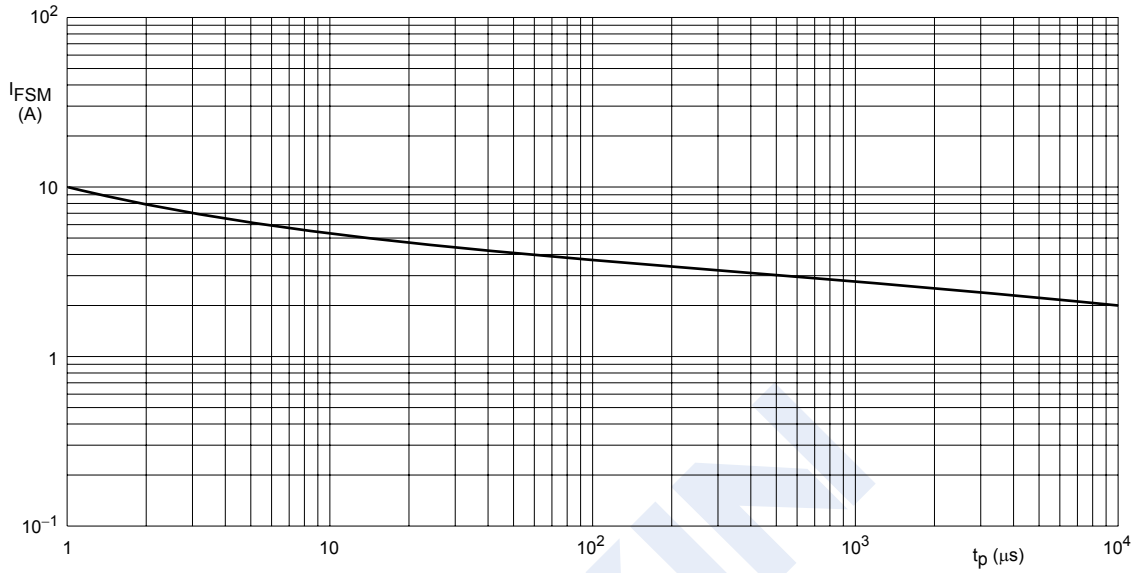
(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

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

Switching Diodes

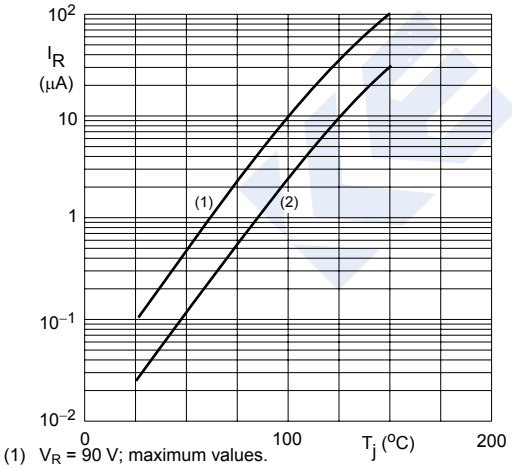
BAS35-HF (KAS35-HF)

■ Typical Characterisitics



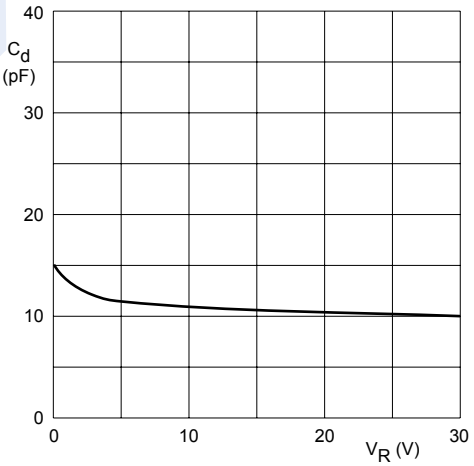
Based on square wave currents.
T_j = 25 °C prior to surge.

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



(1) V_R = 90 V; maximum values.
(2) V_R = 90 V; typical values.

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



f = 1 MHz; T_j = 25 °C.

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

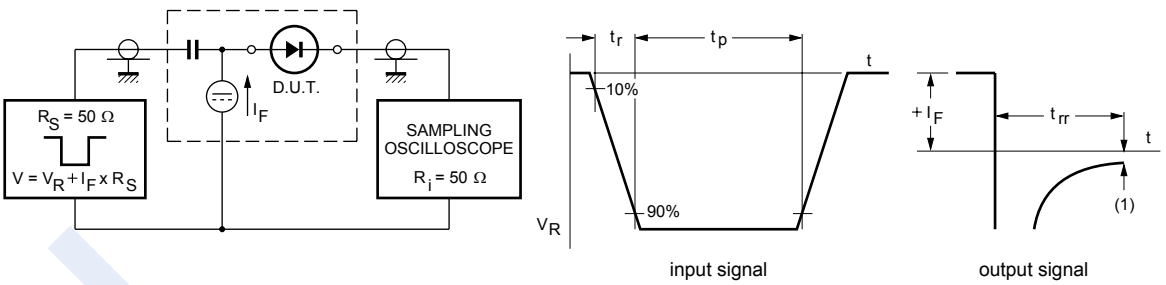


Fig.6 Reverse recovery voltage test circuit and waveforms.