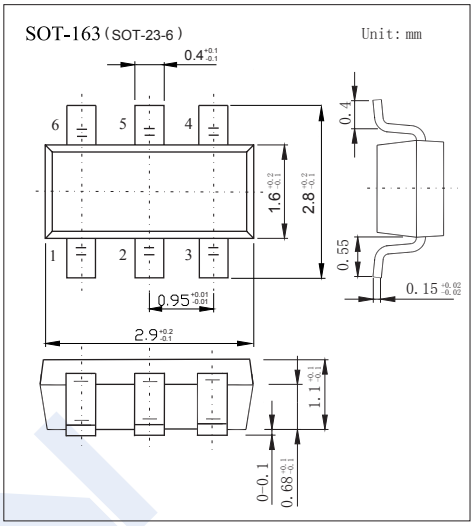
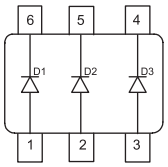
Switching Diodes

BAS16U (KAS16U)



■ Features

- For high-speed switching applications
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Peak Reverse Voltage	V_{RM}	85	V
Diode Reverse Voltage	V_R	80	
Forward Current	I_F	200	mA
Non-Repetitive Peak Surge Forward Current @ t=1us	I_{FSM}	4.5	A
Power Dissipation	P_D	250	mW
Thermal Resistance Junction to Soldering point	$R_{\theta JS}$	150	℃/W
Junction Temperature	T_J	150	℃
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	85			V
Forward voltage	V_F	I_F= 1 mA			0.715	
		I_F= 10mA			0.855	
		I_F= 50 mA			1	
		I_F= 100 mA			1.2	
		I_F= 150 mA			1.25	
Forward recovery voltage	V_{RF}	I_F= 10 mA , t_P=20ns			1.75	
Reverse voltage leakage current	I_R	V_R=75 V			0.1	uA
		V_R=25 V ,Ta = 25℃			30	
		V_R=75 V ,Ta = 25℃			50	
Capacitance between terminals	C_T	V_R= 0 V, f= 1 MHz			2	pF
Reverse recovery time	t_{rr}	I_F=I_R=10mA,Irr=0.1xI_R, R_L=100Ω			4	ns

■ Marking

Marking	A6s

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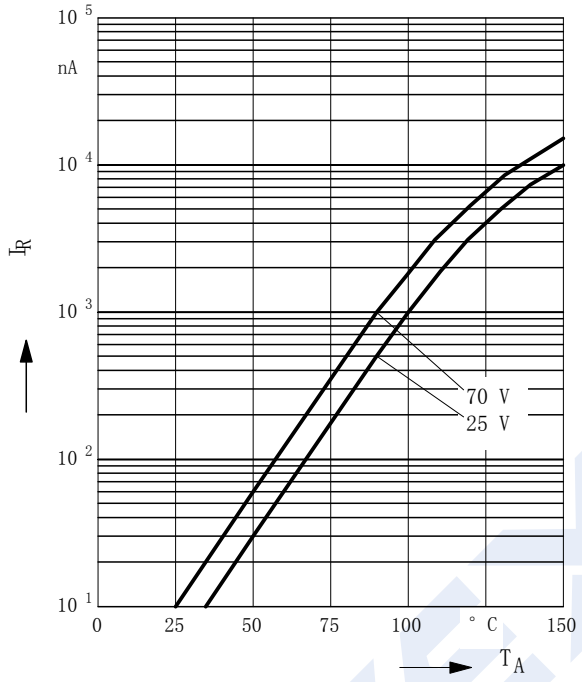
■ Typical Characterisitics

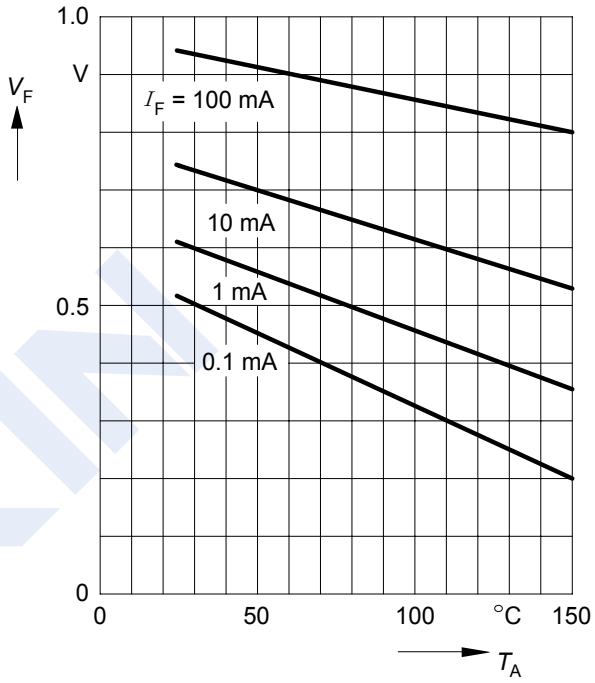
Reverse current $I_R = f(T_A)$

V_R = Parameter



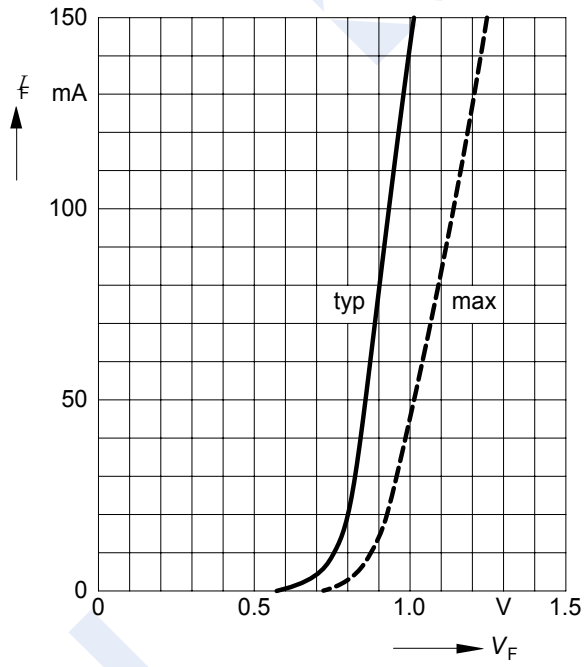
Forward Voltage $V_F = f(T_A)$

I_F = Parameter

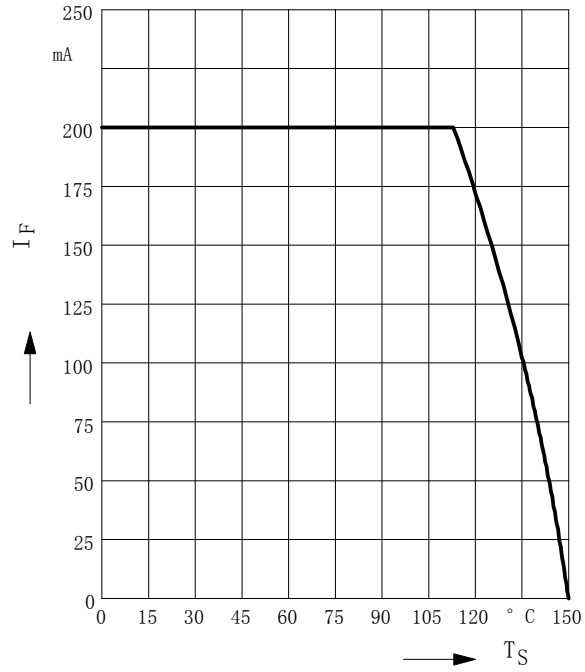


Forward current $I_F = f(V_F)$

T_A = 25°C



Forward current $I_F = f(T_S)$



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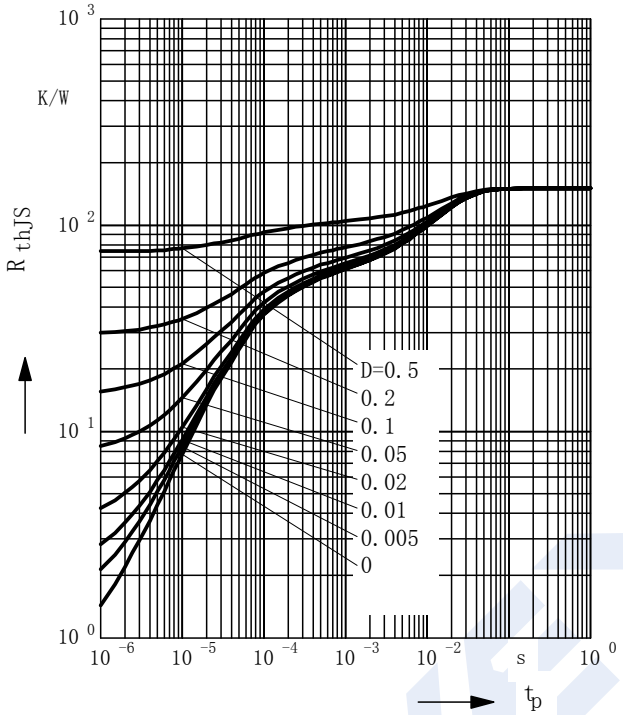
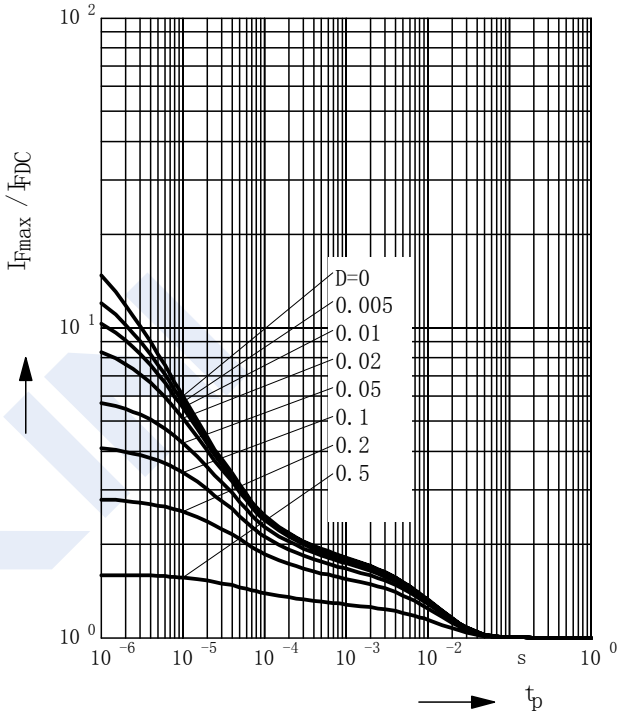
■ Typical Characterisitics

Permissible Puls Load $R_{thJS} = f(t_p)$

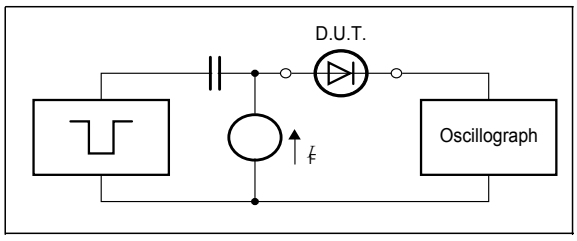


Permissible Pulse Load

$I_{Fmax} / I_{FDC} = f(t_p)$



■ Test circuit for reverse recovery time



Pulse generator: t_p = 100ns, D = 0.05,
t_r = 0.6ns, R_i = 50Ω

Oscillograph: R = 50Ω, t_r = 0.35ns,
C = 0.05pF