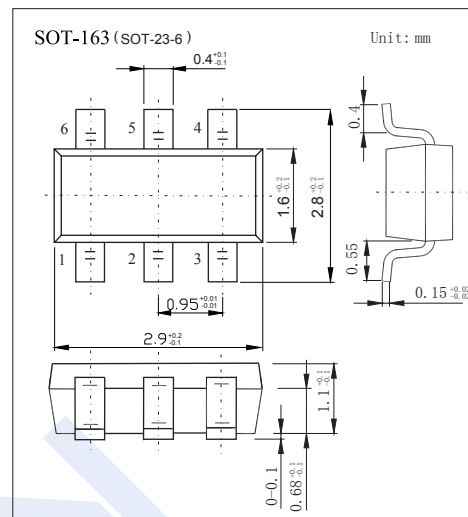
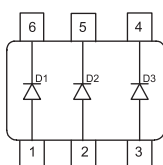


Switching Diodes

BAS16U (KAS16U)

■ Features

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

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

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 @ $t=1\mu\text{s}$	I_{FSM}	4.5	A
Power Dissipation	P_D	250	mW
Thermal Resistance Junction to Soldering point	$R_{\theta JS}$	150	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-65 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	$I_R = 100\ \mu\text{A}$	85			V
Forward voltage	V_F	$I_F = 1\ \text{mA}$			0.715	
		$I_F = 10\ \text{mA}$			0.855	
		$I_F = 50\ \text{mA}$			1	
		$I_F = 100\ \text{mA}$			1.2	
		$I_F = 150\ \text{mA}$			1.25	
Forward recovery voltage	V_{RF}	$I_F = 10\ \text{mA}$, $t_p = 20\ \text{ns}$			1.75	
Reverse voltage leakage current	I_R	$V_R = 75\ \text{V}$			0.1	μA
		$V_R = 25\ \text{V}$, $T_a = 25^\circ\text{C}$			30	
		$V_R = 75\ \text{V}$, $T_a = 25^\circ\text{C}$			50	
Capacitance between terminals	C_T	$V_R = 0\ \text{V}$, $f = 1\ \text{MHz}$			2	pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10\ \text{mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\ \Omega$			4	ns

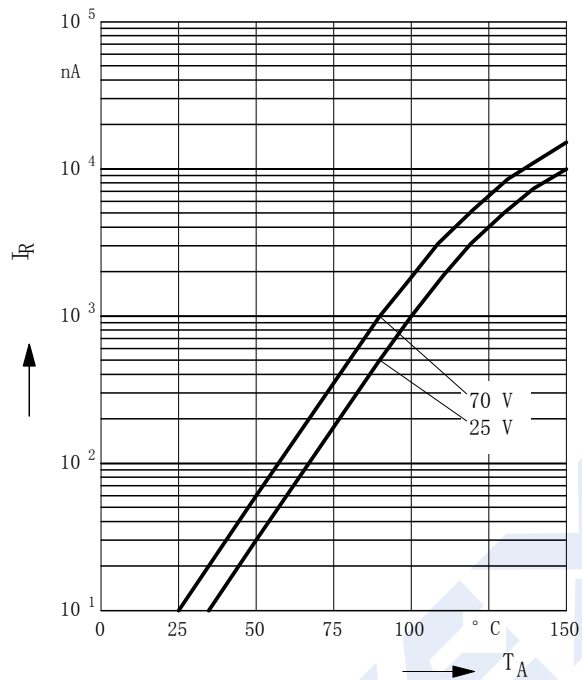
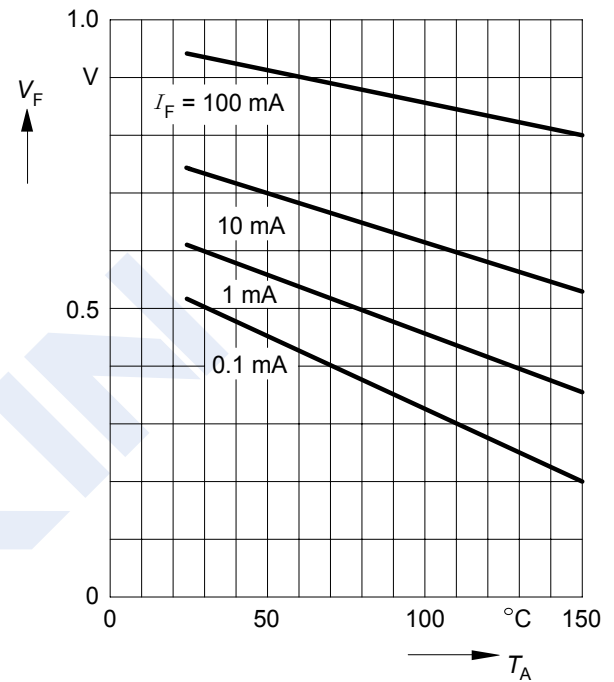
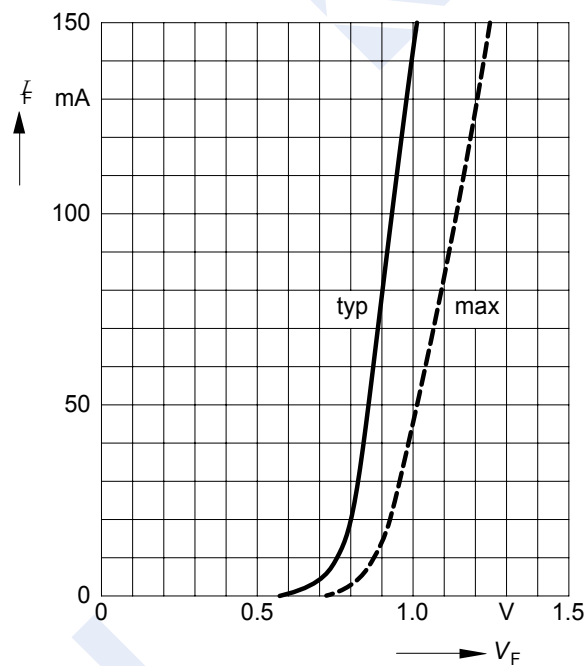
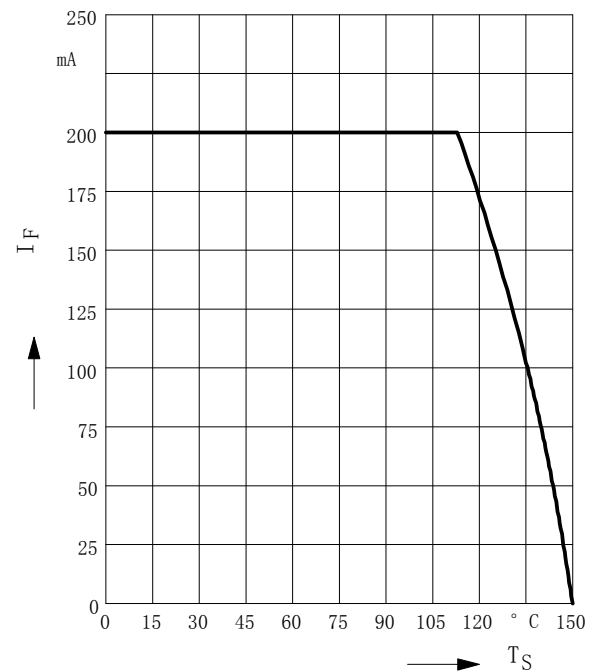
■ Marking

Marking	A6s
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Switching Diodes

BAS16U (KAS16U)

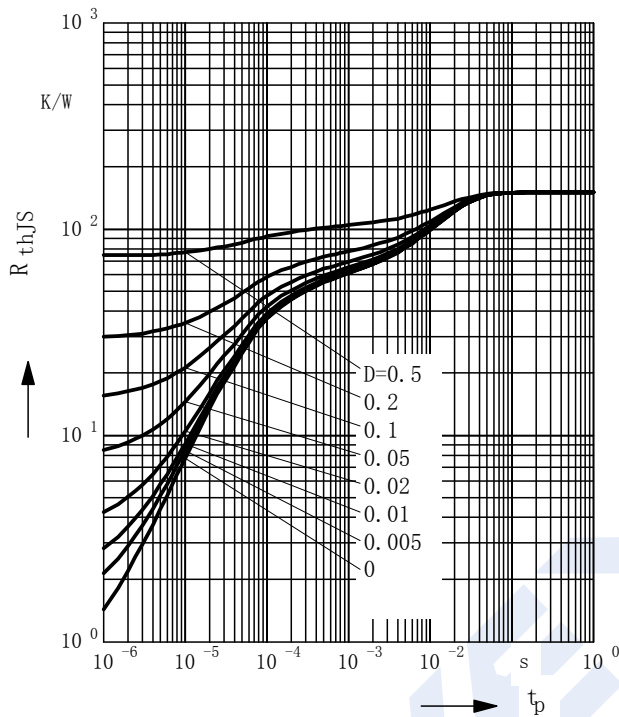
■ Typical Characteristics

Reverse current $I_R = f(T_A)$ $V_R = \text{Parameter}$ Forward Voltage $V_F = f(T_A)$ $I_F = \text{Parameter}$ Forward current $I_F = f(V_F)$ $T_A = 25^\circ\text{C}$ Forward current $I_F = f(T_S)$ 

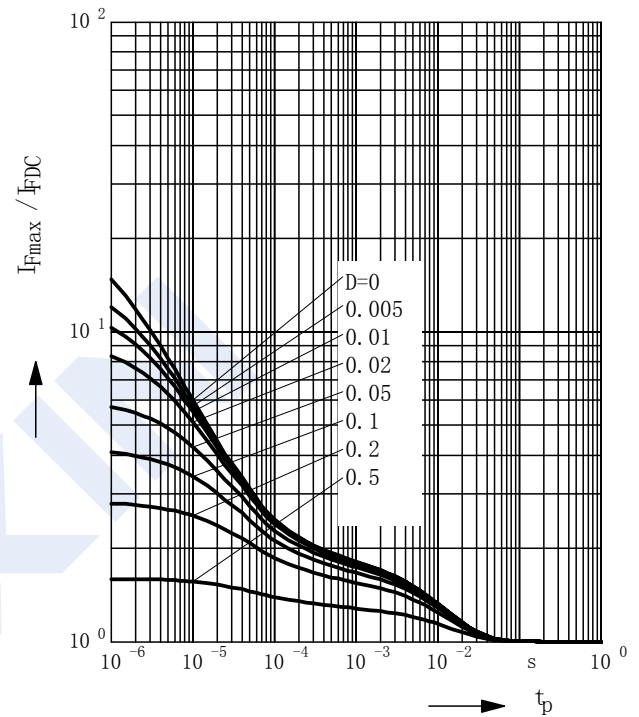
Switching Diodes

BAS16U (KAS16U)

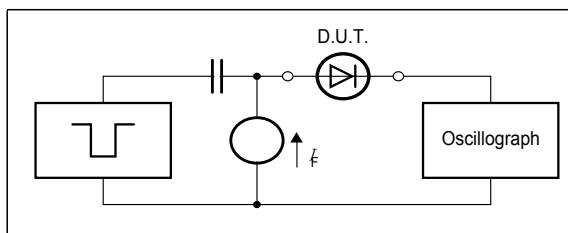
■ Typical Characteristics

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: $t_p = 100\text{ns}$, $D = 0.05$,
 $t_r = 0.6\text{ns}$, $R_i = 50\Omega$

Oscilloscope: $R = 50\Omega$, $t_r = 0.35\text{ns}$,
 $C = 0.05\text{pF}$