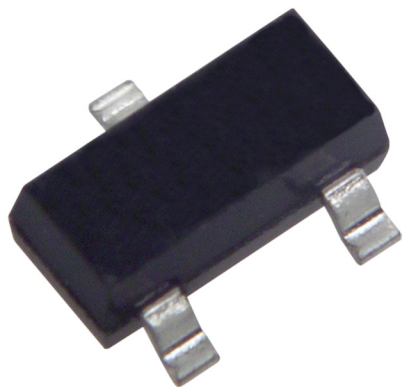


# Surface Mount Barrier Diode

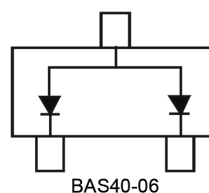
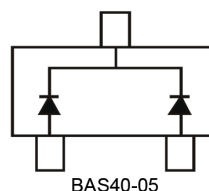
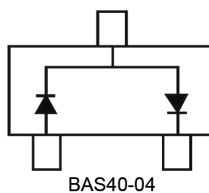
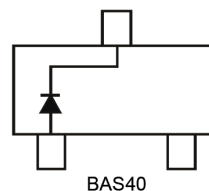


## Features:

- Low turn-on voltage
- Fast switching
- PN Junction guard ring for transient and ESD protection

## Applications:

- High speed switching applications
- Circuit protecting
- Voltage clamping



## Maximum Rating @ Ta=25°C (unless otherwise specified):

Characteristic	Symbol	Value	Unit
Peak repetitive reverse voltage Working peak reverse voltage DC reverse voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	40	V
Forward continuous current	$I_{FS}$	200	mA
Power dissipation	$P_D$	350	mW
Forward surge	$I_{FSM}$	600	mA
Thermal resistance, junction to ambient air	$R_{thJA}$	357	°C/W
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{STG}$	-65 to +150	°C

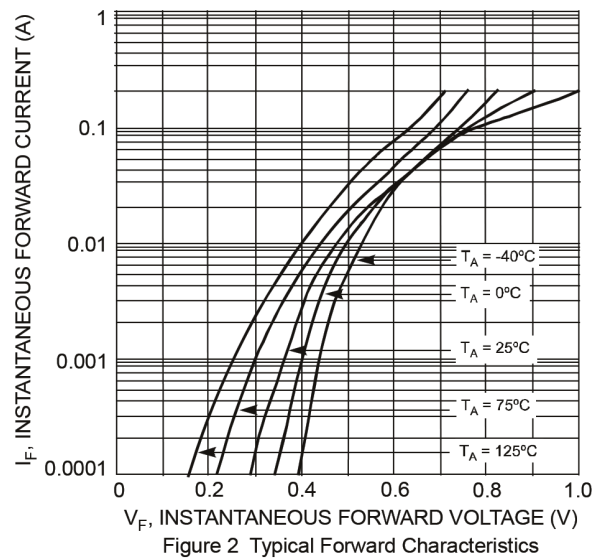
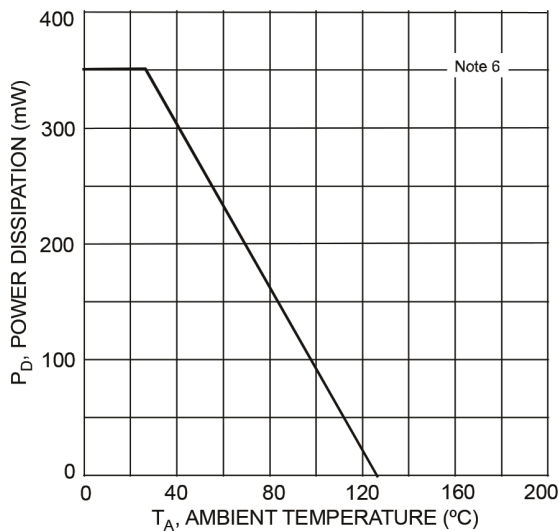


# Surface Mount Barrier Diode

## Electrical Characteristics @ Ta=25°C (unless otherwise specified):

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Reverse breakdown voltage	$V_{(BR)R}$	40	-	-	V	$I_{RS} = 10A$
Forward voltage	$V_F$	-	-	380 1,000	mV	$t_p < 300\mu s, I_F = 1mA$ $t_p < 300\mu s, I_F = 40mA$
Reverse leakage current	$I_R$	-	20	200	nA	$t_p < 300\mu s, V_R = 30V$
Junction capacitance	$C_J$	-	4	5	pF	$V_R = 0V, f = 1MHz$
Reverse recovery time	$t_{rr}$	-	-	5	ns	$I_F = I_R = 10mA$ to $I_R = 1mA, R_L = 100\Omega$

## Typical Characteristics @ Ta=25°C (unless otherwise specified):



# Surface Mount Barrier Diode

Typical Characteristics @  $T_A=25^\circ\text{C}$  (unless otherwise specified):

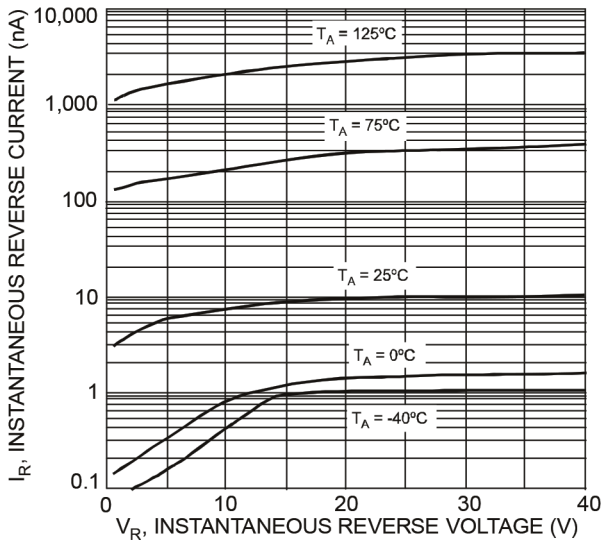


Figure 3 Typical Reverse Characteristics

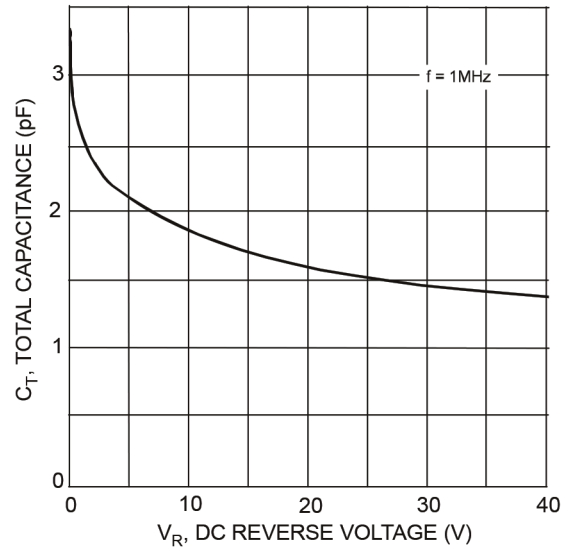
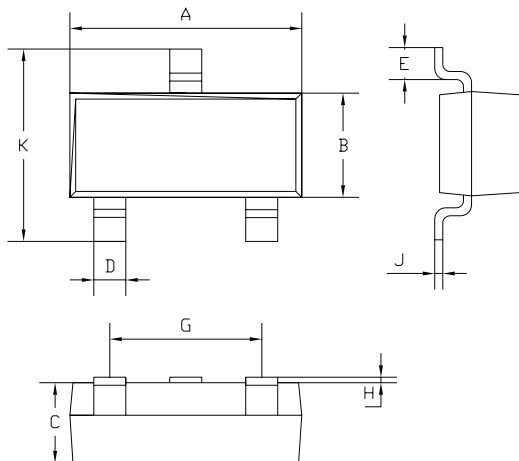


Figure 4 Total Capacitance vs. Reverse Voltage

## Package Outline

Plastic Surface Mounted Package

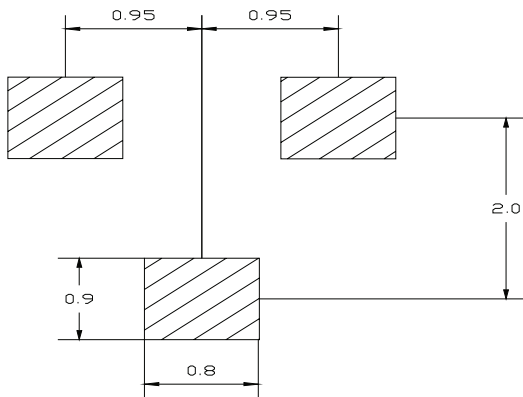


SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45

Dimensions : Millimetres

# Surface Mount Barrier Diode

## Soldering Footprint



Dimensions : Millimetres

## Part Number Table

Description	Part Number
Diode, Schottky, 40V, SOT23	BAS40
Diode, Dual Schottky, 40V, SOT23	BAS40-04
	BAS40-05
	BAS40-06

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