

# SILICON SCHOTTKY BARRIER DIODE

## DESCRIPTION:

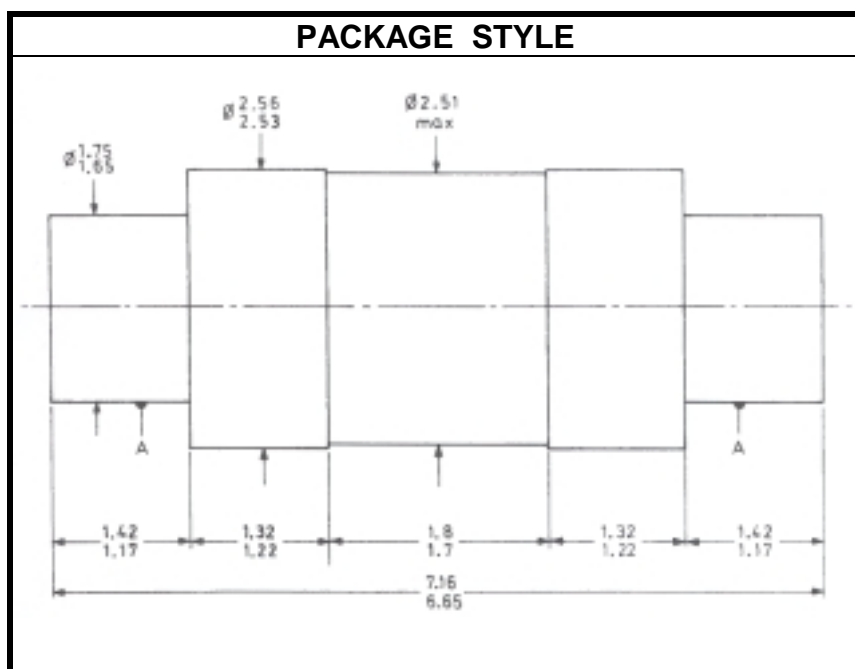
The **ASI BAT38** is a silicon Schottky barrier mixer diode, Designed for use in Ka frequency band Applications.

## FEATURES INCLUDE:

- Low  $R_S$ —5.0 $\Omega$
- Low NF 8.5 Db Typ.
- Frequency Range 26 to 40 GHz
- Available as Matched pairs by adding the MP to the part number. Matching criteria is  $\pm 10\%$  on rectified current and within 150  $\Omega$  i.f. impedance.

## MAXIMUM RATINGS

$V_R$	2.0 V
$P_{DISS}$	250 mW @ $T_C = 25^\circ\text{C}$
$T_J$	-55 $^\circ\text{C}$ to +100 $^\circ\text{C}$
$T_{STG}$	-55 $^\circ\text{C}$ to +100 $^\circ\text{C}$



## CHARACTERISTICS $T_C = 25^\circ\text{C}$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIM	UNITS
$V_R$	$I_R = 10\ \mu\text{A}$	2.0			V
$V_F$	$I_F = 1.0\ \text{mA}$			0.29	V
$I_F$	$V_F = 0.5\ \text{V}$	2.0			mA
$I_R$	$V_R = 0.5\ \text{V}$			2.0	$\mu\text{A}$
$C_T$	$V_R = 0\ \text{V}$ $f = 1.0\ \text{MHz}$		.27		pF
NF	$I_F = 0.5\ \text{mA}$ $f = 30\ \text{GHz}$		6.0		dB