
HSE11

GaAs Schottky Barrier Diode for SHF Mixer

HITACHI

ADE-208-162A (Z)

Rev. 1

Sep. 1994

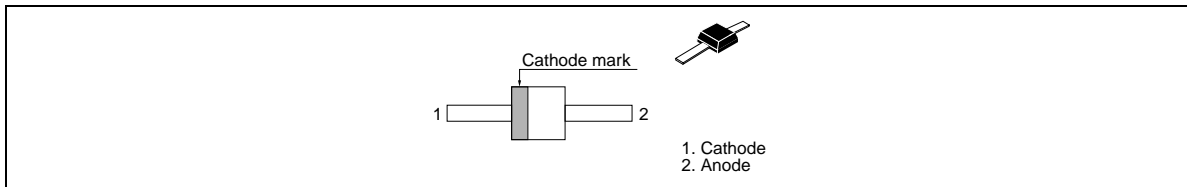
Features

- Low noise GaAs schottky.
- Low capacitance. ($C = 0.4\text{pF}$ max)

Ordering Information

Type No.	Mark	Package Code
HSE11	Cathode mark	ERP

Outline



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

Item	Symbol	Value	Unit
Reverse voltage	V_R	4.0	V
Forward current	I_F	50	mA
Peak forward current	I_{FM}	150	mA
Junction temperature	T_j	125	$^\circ\text{C}$
Lead temperature	T_l^*	230	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

Note: Value at the nearest point from body for 10sec max. (one time)

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Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.0	V	$I_F = 50\text{mA}$
Reverse voltage	V_R	4.0	—	—	V	$I_R = 10\mu\text{A}$
Capacitance	C	—	—	0.4	pF	$V_R = 0\text{V}$, $f = 1\text{MHz}$
Series resistance	r_s	—	—	1.3	$\frac{1}{2}$	$r_s = 50V_{F3} - 150.75V_{F2} + 100.75V_{F1}$ $V_{F1}: I_F = 1.0\text{mA}$, $V_{F2}: I_F = 2.7\text{mA}$, $V_{F3}: I_F = 20\text{mA}$
ESD capability	—	25	—	—	V	*C = 25pF

Note: Failure criterion; $I_R \leq 1\mu\text{A}$ at $V_R = 2\text{V}$

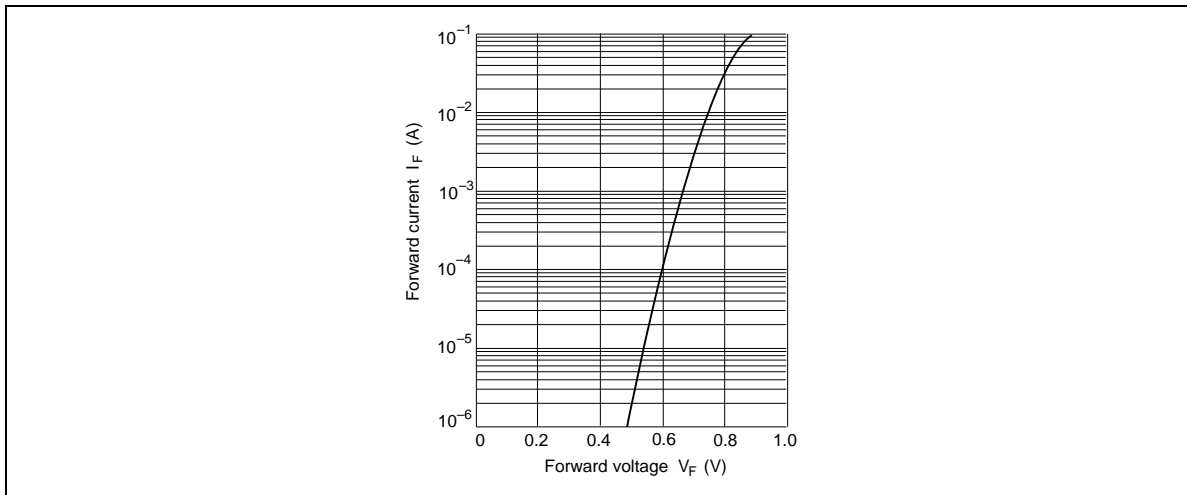


Fig.1 Forward current Vs. Forward voltage

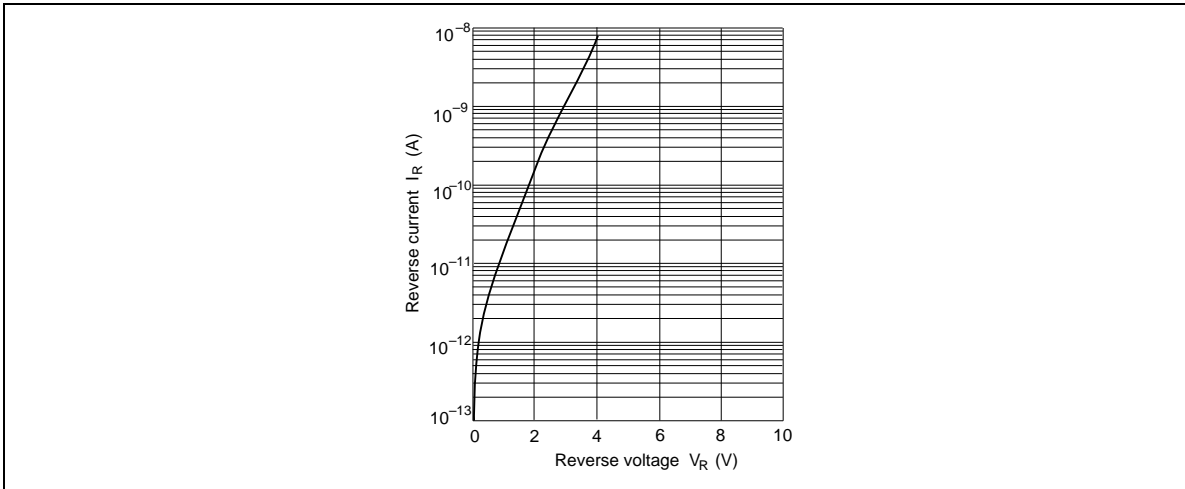


Fig.2 Reverse current Vs. Reverse voltage

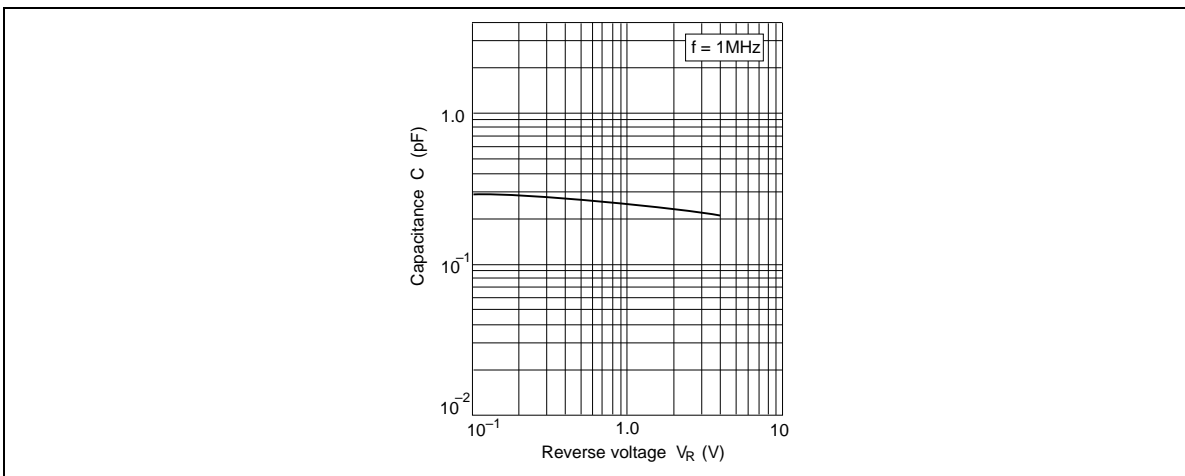


Fig.3 Capacitance Vs. Reverse voltage

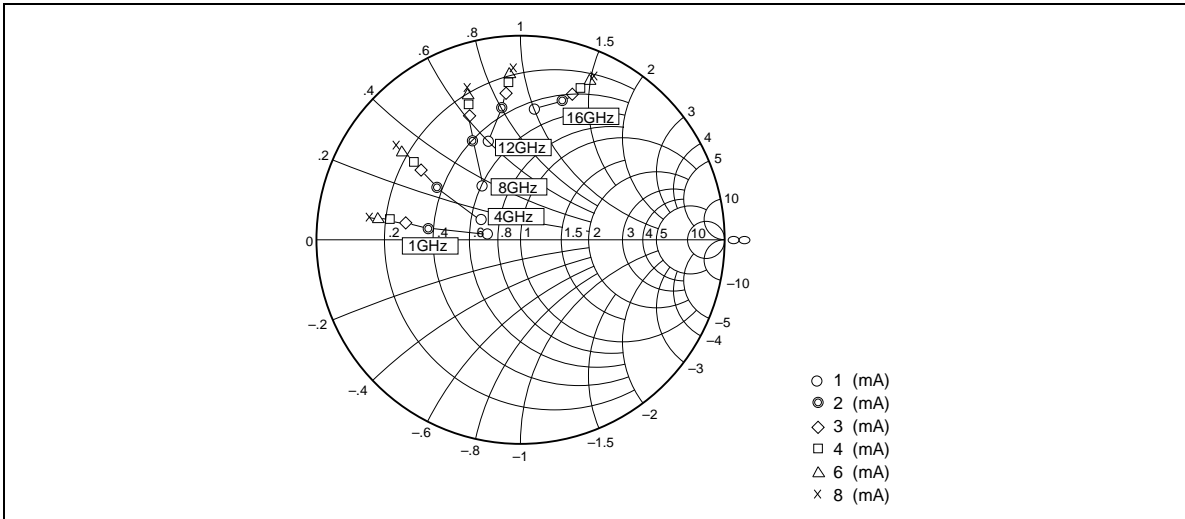


Fig.4 S Parameter

Package Dimensions

