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BAS16W

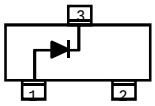
SILICON EPITAXIAL PLANAR SWITCHING DIODE

For high speed switching applications

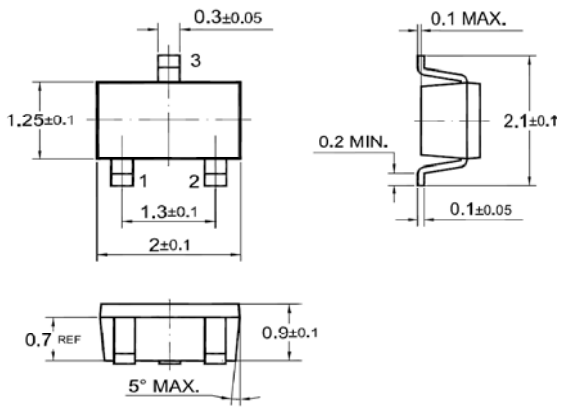
MECHANICAL DATA :

* Case : SOT-323 plastic Case
* Marking code : A6

BAS16W



SOT-323



Dimensions in millimeters

ABSOLUTE MAXIMUM RATING (Ta =25 °C)

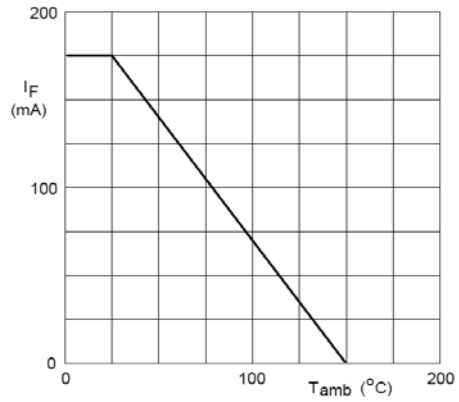
Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage		V_{RRM}	85	V
Continuous Reverse Voltage		V_R	75	V
Continuous Forward Current		I_F	155	mA
Repetitive Peak Forward Current		I_{FRM}	500	mA
Non-repetitive Peak	t = 1 µs	I_{FSM}	4.5	A
Forward Surge Current	t = 1 ms		1.0	
	t = 1 s		0.5	
Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_J	150	°C
Storage Temperature Range		T_{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	I_F = 1 mA	V_F	-	-	715	mV
	I_F = 10 mA		-	-	855	mV
	I_F = 50 mA		-	-	1.00	V
	I_F = 150 mA		-	-	1.25	V
Reverse Current	V_R = 25 V	I_R	-	-	30	nA
	V_R = 75 V		-	-	1.0	µA
	V_R = 25 V, Tj = 150 °C		-	-	30	µA
	V_R = 75 V, Tj = 150 °C		-	-	50	µA
Diode Capacitance	V_R = 0 V, f = 1 MHz	C_D	-	-	1.5	pF
Reverse Recovery Time	I_F = 10mA, VR = 6 V, Irr = 1 mA,R_L = 100 Ω:	Trr	-	-	4	ns

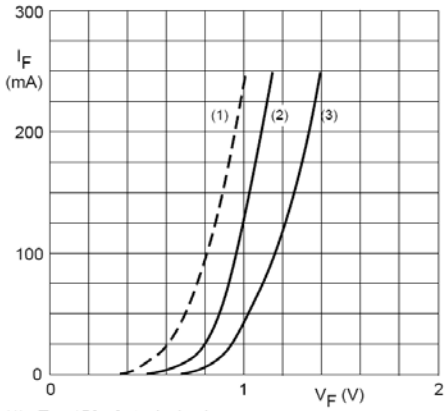
RATINGS AND CHARACTERISTIC CURVES (BAS16W)

FIG.1 - Maximum permissible continuous forward current as a function of ambient temperature.



Device mounted on an FR4 printed-circuit board.

FIG.2 - Forward current as a function of forward voltage.



(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

FIG.3 - Reverse current as a function of junction temperature

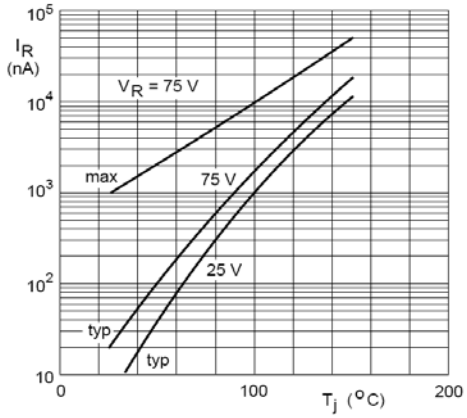


FIG.4 - Diode capacitance as a function of reverse voltage; typical values

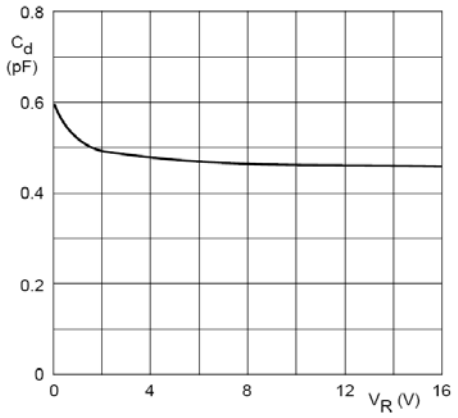
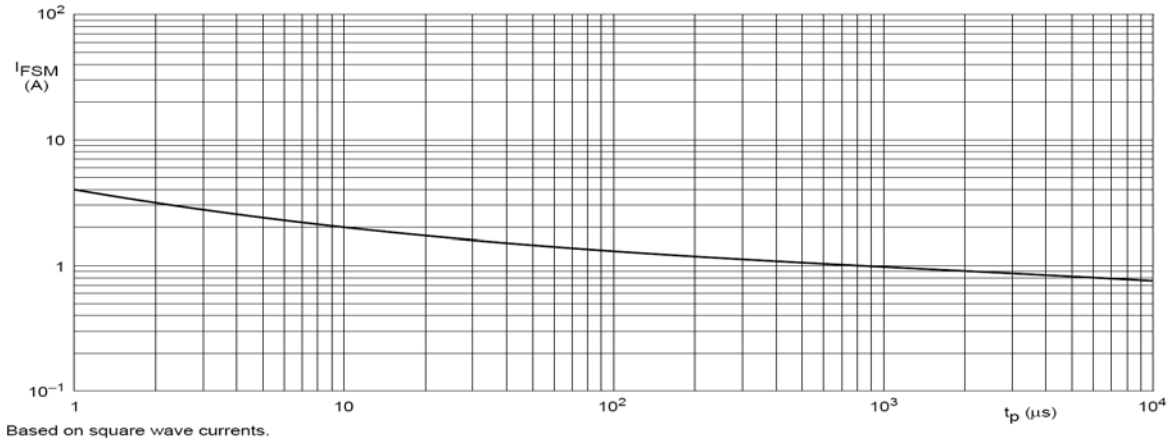


FIG.5 - Maximum permissible non-repetitive peak forward current as a function of pulse duration



Based on square wave currents.
T_j = 25 °C prior to surge.