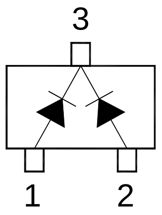
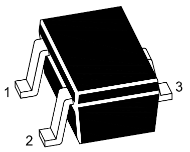
BAT378W

SILICON EPITAXIAL PLANAR SCHOTTKY BARRIER DIODE





SOT-323 Plastic Package

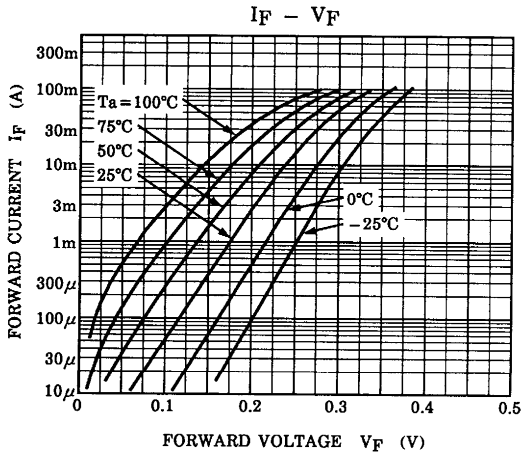
Marking Code: **B7**

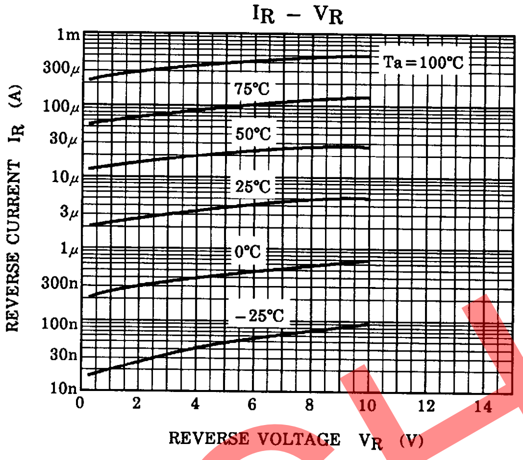
Absolute Maximum Ratings (T_a = 25 °C)

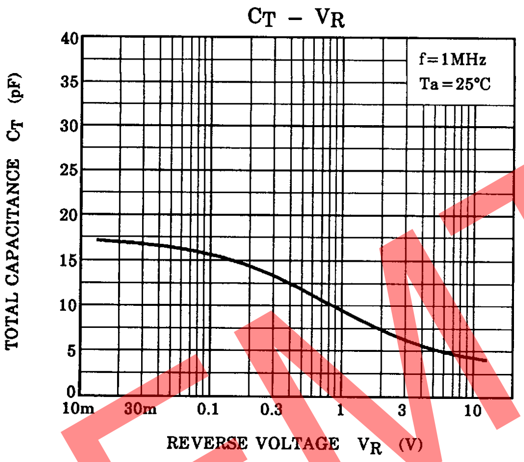
Parameter	Symbol	Value	Unit
Maximum Peak Reverse Voltage	V_{RM}	15	V
Reverse Voltage	V_R	10	V
Maximum Peak Forward Current	I_{FM}	200	mA
Surge Forward Current (10 ms)	I_{FSM}	1	A
Average Forward Current	I_O	100	mA
Power Dissipation	P_{tot}	100	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	-55 to +125	°C
Operating Temperature Range	T_{opr}	-40 to +100	°C

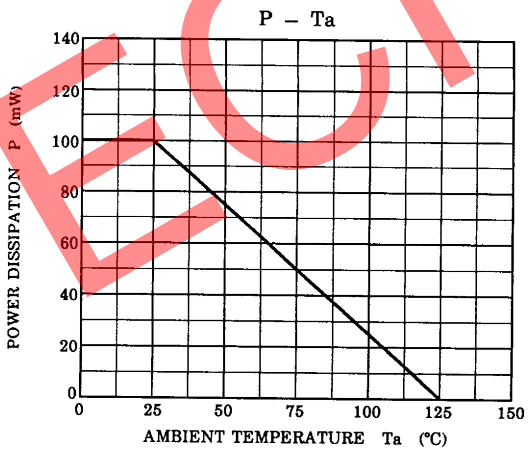
Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at I_F = 5 mA at I_F = 100 mA	V_F	- -	- -	0.3 0.5	V
Reverse Current at V_R = 10 V	I_R	-	-	20	µA
Total Capacitance at V_R = 0 V, f = 1 MHz	C_T	-	20	40	pF


I_F – V_F
FORWARD CURRENT I_F (A)
300m
100m
30m
10m
3m
1m
300μ
100μ
30μ
10μ
0
0.1
0.2
0.3
0.4
0.5
FORWARD VOLTAGE V_F (V)
Ta = 100°C
75°C
50°C
25°C
0°C
– 25°C


I_R – V_R
REVERSE CURRENT I_R (A)
1m
300μ
100μ
30μ
10μ
3μ
1μ
300n
100n
30n
10n
0
2
4
6
8
10
12
14
REVERSE VOLTAGE V_R (V)
Ta = 100°C
75°C
50°C
25°C
0°C
– 25°C


C_T – V_R
TOTAL CAPACITANCE C_T (pF)
40
35
30
25
20
15
10
5
0
10m
30m
0.1
0.3
1
3
10
REVERSE VOLTAGE V_R (V)
f = 1MHz
Ta = 25°C


P – Ta
POWER DISSIPATION P (mW)
140
120
100
80
60
40
20
0
0
25
50
75
100
125
150
AMBIENT TEMPERATURE Ta (°C)