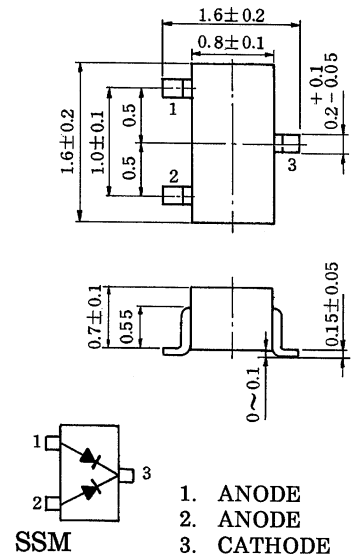
TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS385

High Speed Switching

Unit: mm

- Low forward voltage: $V_{F\ (2)}$ = 0.23V (typ.) @I_F = 5mA
- Small package



JEDEC	—
EIAJ	—
TOSHIBA	1-2S1B

Weight: 2.4mg

Maximum Ratings (Ta = 25°C)

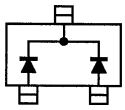
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	V_{RM}	15	V
Reverse voltage	V_R	10	V
Maximum (peak) forward current	I_{FM}	200 *	mA
Average forward current	I_O	100 *	mA
Surge current (10ms)	I_{FSM}	1 *	A
Power dissipation	P	100	mW
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°C
Operating temperature range	T_{opr}	−40~100	°C

*: Unit rating. Total rating = unit rating × 1.5

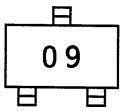
Electrical Characteristics (Ta = 25°C)

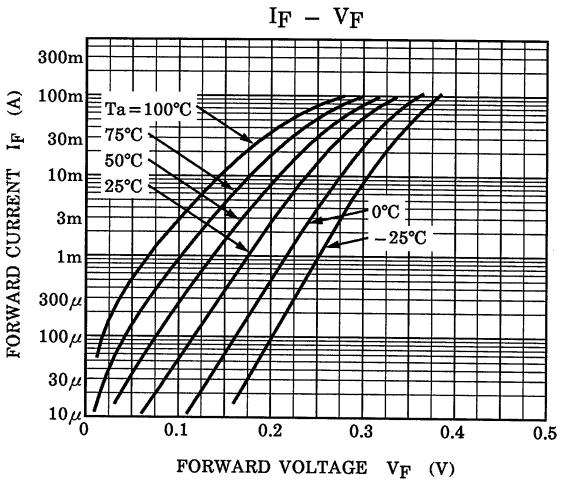
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_{F\ (1)}$	—	I_F = 1mA	—	0.18	—	V
	VF (2)	—	IF = 5mA	—	0.23	0.30	V
	$V_{F\ (3)}$	—	I_F = 100mA	—	0.35	0.50	V
Reverse current	I_R	—	V_R = 10V	—	—	20	μA
Total capacitance	C_T	—	V_R = 0, f = 1MHz	—	20	40	pF

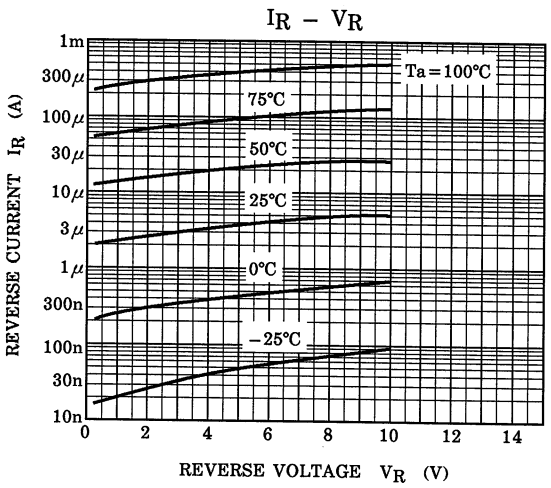
Equivalent Circuit (Top View)

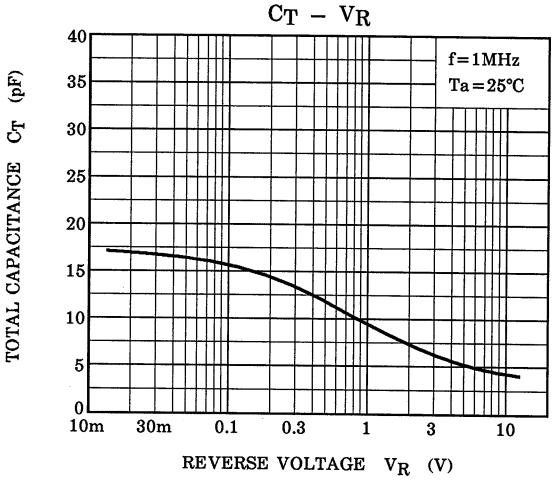


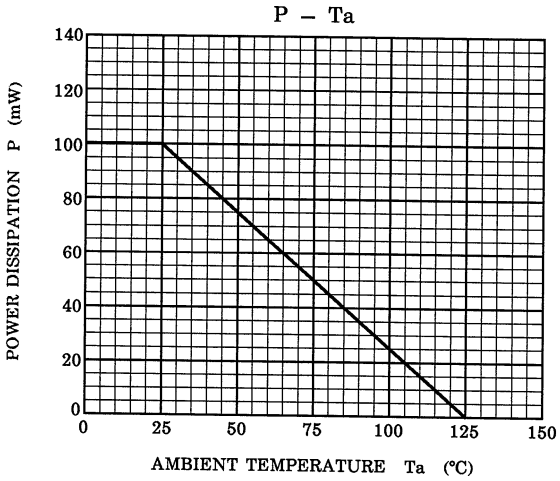
Marking




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


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


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


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)

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