SMALL SIGNAL SCHOTTKY DIODES

REVERSE VOLTAGE : 30 V
CURRENT: 0.2 A

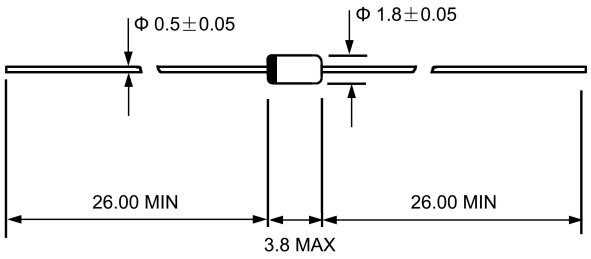
FEATURES

- ◇ These diodes feature very low turn-on voltage and fast guard ring against excessive voltage,such as electrostatic discharges
- ◇ 200 mW power dissipation
- ◇ These diodes are also available in the SOD-123 case with the type designations BAT42W to BAT43W and in designations LL42 to LL43

MECHANICAL DATA

- ◇ Case: DO-35, glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.004 ounces, 0.13 grams

DO-35(GLASS)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

ABSOLUTE MAXIMUM RATINGS

		BAT42	BAT43	UNITS
Repetitive peak reverse voltage	V_{RRM}	30		V
Reverse breakdown voltage I_R=100μA (pulsed)	$V_{(BR)}$	30		V
Average forward rectified current half wave rectification with resist.load @T_A=25℃ and f≥50Hz	I_{AV}	200.0		mA
Forward surge current @ t<10ms	I_{FSM}	4		A
Power dissipation @ T_A=65℃	P_{tot}	200[1)]		mW
Junction temperature	T_J	125		℃
Storage temperature range	T_{STG}	-55 --- +150		℃

1)Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS

		MIN	TYP	MAX	UNITS
Forward voltage @I_F=200 mA BAT42	V_F	-	-	1	V
BAT43		-	-	1	
I_F=10 mA BAT42		-	-	0.4	
I_F=50 mA BAT43		-	-	0.65	
I_F=2 mA BAT43		-	-	0.33	
I_F=15 mA BAT43		-	-	0.45	
Capacitance @ V_R=1V, f=1MHz	C_{tot}	-	7	-	pF
Reverse breakdown voltage V_R=25 V	I_R	-	-	0.5	μA
V_R=25 V, T_J=100℃		-	-	100	
Reverse recovery time from I_F=10mA to I_R=10mA I_{rr}=1mA, R_L=100Ω.	t_{rr}	-	-	5	ns
Thermal resistance junction to ambient	$R_{\theta JA}$			300[1)]	K/W
Rectification efficiency (NOTE2)	η_V	0.80	-	-	-

1)Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature.
2)R_L=15KΩ C_L=300pF,f=45MHz,V_{RF}=2V

FIG.1 –FORWARD DERATING CURVE

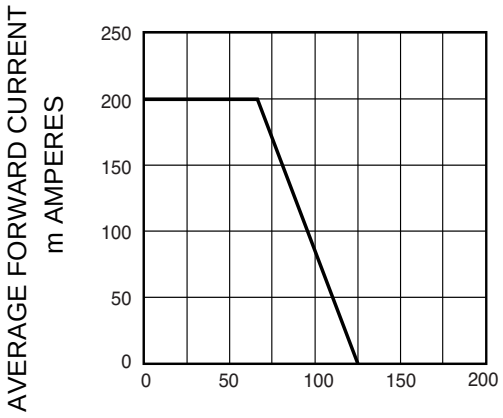


FIG.2 –PEAK FORWARD SURGE CURRENT

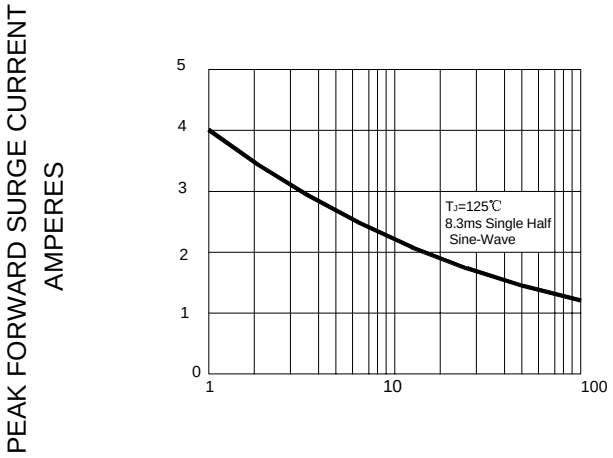


FIG.3–TYPICAL FORWARD CHARACTERISTIC

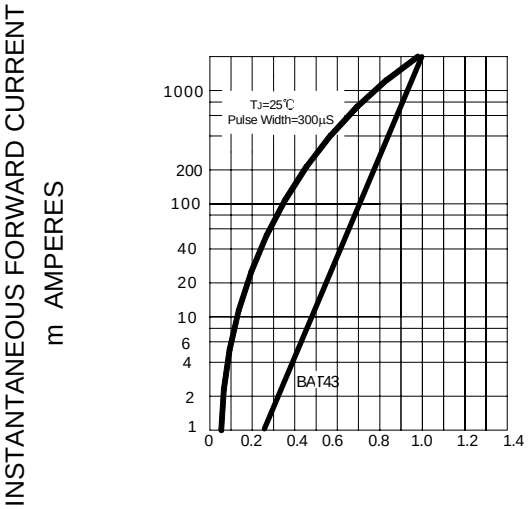


FIG.4–PEAK JUNCTION CAPACITANCE