SAMYANG ELECTRONICS

BAT46

SMALL SIGNAL SCHOTTKY DIODES

VOLTAGE RANGE: 100 V
CURRENT: 0.15 A

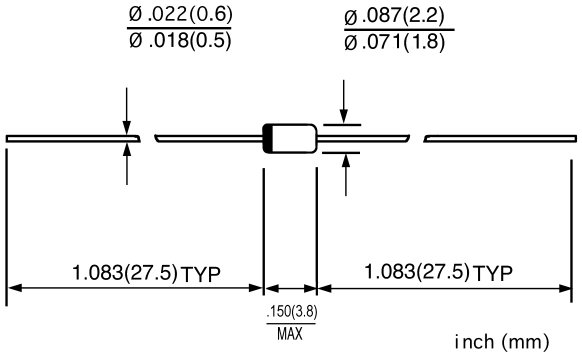
FEATURES

- ◇ For general purpose applications
- ◇ These diodes features very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- ◇ These diodes is Iso available in the SOD - 123 case with type designation BAT46W and in the MiniMELF case wyht type designations LL46

MECHANICAL DATA

- ◇ Case:JEDEC DO--35,glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: Approx. 0.13 gram

DO - 35(GLASS)



ABSOLUTE RATINGS

Parameter	Symbol	Value	UNITS
Repetitive peak reverse voltage	V_R	100.0	V
Forw ard continuius current @ tamb=25℃	I_F	150[1)]	mA
Repetitive peak forw ard current @ tp<1s, δ <=0.5,T_A=25℃	I_{FRM}	350[1)]	mA
Surge forw ard current @ tp<10ms,T_A=25℃	I_{FSM}	750[1)]	mA
Pow er dissipation[1)] @ T_A=65 ℃	P_{tot}	150[1)]	mW
Thermal resistance juntion to ambient air	R_{JA}	0.3[1)]	℃ mW
Junction tenperature	T_J	125	℃
Ambient operating temperature range	T_A	-65 ---+ 125	℃
Storage temperature range	T_{STG}	-65 ---+ 150	℃

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	UNITS
Reverse breakdow n voltage	V_R	I_R = 100 μ A(pulsed)	100.0			V
Leakage current pulse test tp<300 μ s, δ <2%	I_R	V_R = 1.5V			0.5	μ A
		V_R = 1.5V,T_j=60℃			5.0	
		V_R = 10V			0.8	
		V_R = 10V,T_j=60℃			7.5	
		V_R = 50V			2.0	
		V_R = 50V,T_j=60℃			15.0	
		V_R = 75V			5.0	
		V_R = 75V,T_j=60℃			20.0	
Forw ard voltage pulse test tp<300 μ s, δ <2%	V_F	I_F = 0.1mA			0.25	V
		I_F = 10mA			0.45	
		I_F = 250mA			1.0	
Junction capacitance	C_J	V_R = 0V,f=1MHz		10		pF
		V_R = 1V,f=1MHz		6		
Thermal resistance junction to ambient air	R_{JA}				300[1)]	℃/W

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

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FIG.1 – FORWARD CURRENT VERSUS FORWARD VOLTAGE AT DIFFERENT TEMPERATURES (TYPICAL VALUES)

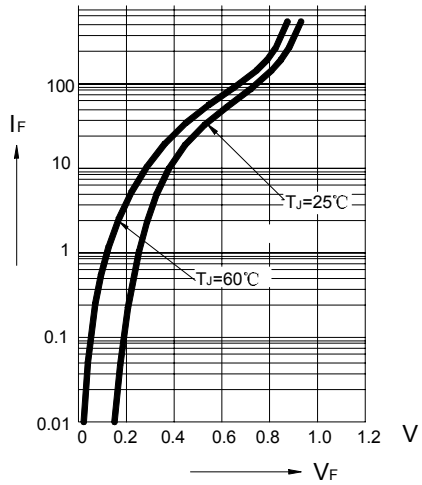


FIG.2 – FORWARD CURRENT VERSUS FORWARD VOLTAGE (TYPICAL VALUES)

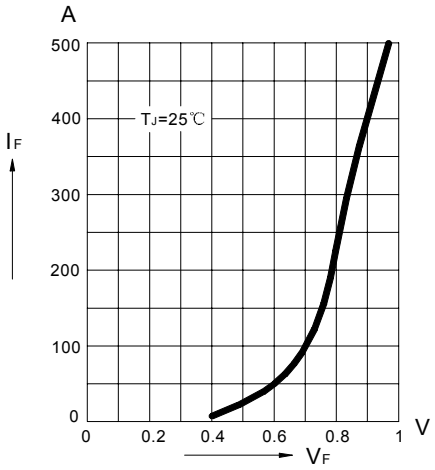


FIG.3 – REVERSE CURRENT VERSUS JUNCTION TEMPERATURE (TYPICAL VALUES)

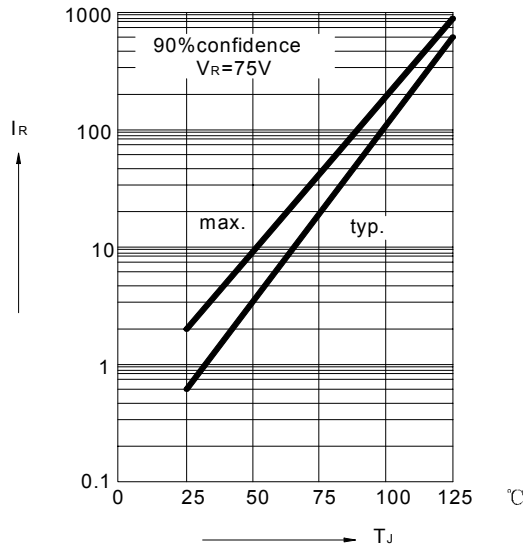


FIG.4 – REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

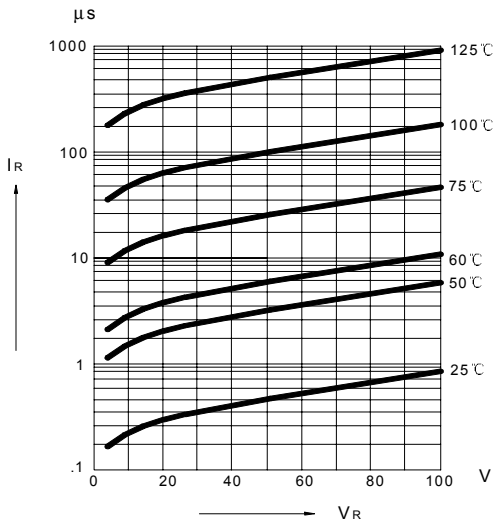


FIG.5 – CAPACITANCE C VERSUS REVERSE APPLIED VOLTAGE V_R (TYPICAL VALUES)

