



SY1045V2

LOW VF SCHOTTKY RECTIFIER

Reverse Voltage - 45 Volts

Forward Current - 10.0 Ampere

FEATURES

- Ideal for automated placement
- Low forward voltage drop, low power losses
- High efficiency Operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Package suitable for automated handling
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

Case : TO-277, Plastic

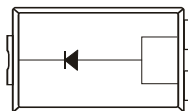
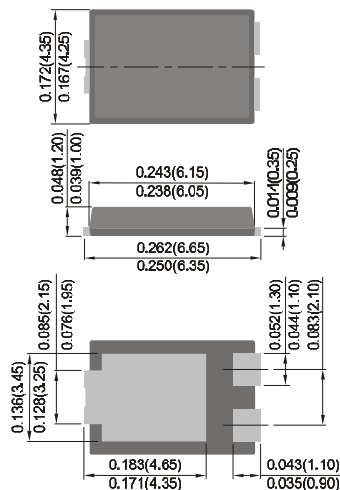
Terminals : Solderable per MIL-STD-750, Method 2026

Weight: 0.0037 ounces, 0.1073 grams

Marking:SY1045V2

TO-277

Unit : inch(mm)



MAXIMUM RATINGS(T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	45	V
Maximum RMS Voltage	V _{RMS}	32	V
Maximum DC Blocking Voltage	V _R	45	V
Maximum Average Rectified Output Current	I _{F(AV)}	10	A
Peak Forward Surge Current:8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	275	A
Typical Junction capacitance V _R =4V,1MHz	C _J	860	pF
Typical Thermal Resistance ,Junction to Ambient Junction to Case	R _{θJA} R _{θJC}	110 13	°C/W
Operating junction temperature range and Storage temperature range	T _J ,T _{STG}	-55 to + 150	°C

NOTES:

- 1.Mounted on an FR4 PCB, single-sided copper, with 100cm² copper pad area.
- 2.Mounted on an FR4 PCB, single-sided copper, mini pad.

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ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	V _{BR}	I _R =0.5mA T _A =25°C	45	-	-	V
Instantaneous forward voltage	V _F	I _F =1A T _A =25°C	-	0.28	-	V
		I _F =5A T _A =25°C	-	0.36	-	V
		I _F =10A T _A =25°C	-	0.41	0.44	V
		I _F =1A T _A =125°C	-	0.18	-	V
Reverse current	I _R	V _R =36V T _A =25°C	-	70	-	μA
		V _R =45V T _A =25°C	-	-	220	μA
		V _R =45V T _A =125°C	-	35	-	mA

RATING AND CHARACTERISTIC CURVES

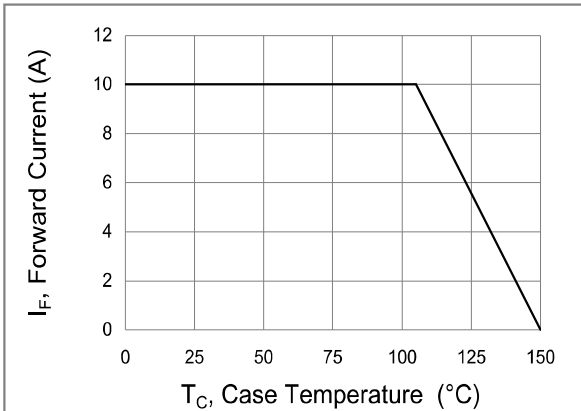


Fig.1 Forward Current Derating Curve

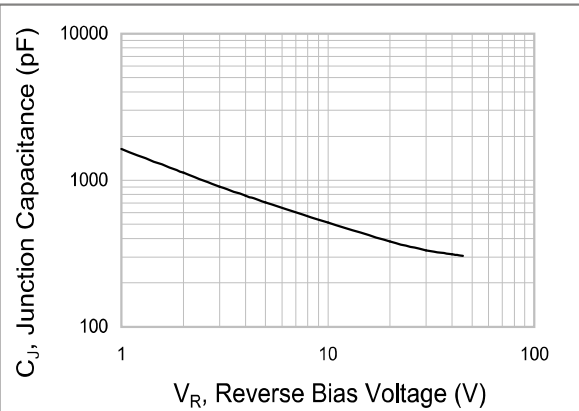


Fig.2 Typical Junction Capacitance

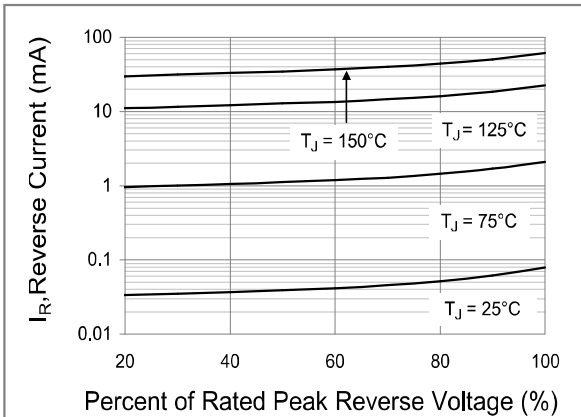


Fig.3 Typical Reverse Characteristics

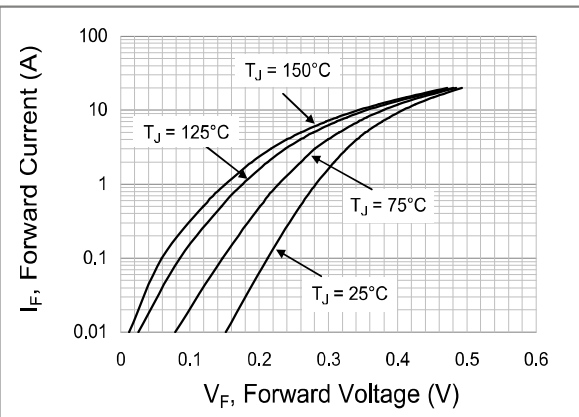


Fig.4 Typical Forward Characteristics