WILLAS

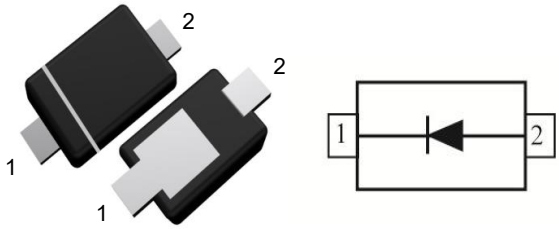
RoHS COMPLIANT

MBR120ET1 THRU MBR1200ET1

1.0A Schottky Barrier Rectifiers - 20V~200V

PRIMARY CHARACTERISTICS	
V_{RRM}	20V~200V
I_F	1.0A
V_F	0.48V~0.92V
$T_{J,Max}$	125℃、150℃

SOD-323HE PACKAGE



FEATURES

- Low power loss,high efficiency
- For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
- Guardring for over voltage protection
- High temperature soldering guaranteed: 260°C/10 seconds at terminals.

MECHANICAL DATA

- Case：Molded plastic,SOD-323HE
- Polarity：Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant

Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified

Parameter Symbol	symbol	MBR 120ET1	MBR 130ET1	MBR 140ET1	MBR 150ET1	MBR 160ET1	MBR 180ET1	MBR 1100ET1	MBR 1150ET1	MBR 1200ET1	Unit
device marking code		12	13	14	15	16	18	110	115	120	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current at Tc = 75°C	$I_{F(AV)}$	1.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	22									A
Typical thermal resistance (Note 1)	RθJA RθJL	210 70									°C/W
Operating junction temperature range	T_J	–55 to +125				–55 to +150					°C
storage temperature range	T_{STG}	–55 to +150									°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	MBR 120ET1	MBR 130ET1	MBR 140ET1	MBR 150ET1	MBR 160ET1	MBR 180ET1	MBR 1100ET1	MBR 1150ET1	MBR 1200ET1	Unit
Maximum instantaneous forward voltage at(IF = 0.7 A, T_J = 25°C) (IF = 1.0 A, T_J = 25°C)	V_F	0.48 0.55			0.68		0.85		0.9	0.92	V
Maximum DC reverse current at rated DC blocking voltage T_A = 25°C T_J = 125°C	I_R	0.25 10	0.13 10	0.03 10							mA
Typical junction capacitance at 4.0V, 1MHz	C_J	160									PF

NOTES:

1. 8.0mm2 (.013mm thick) land areas

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Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

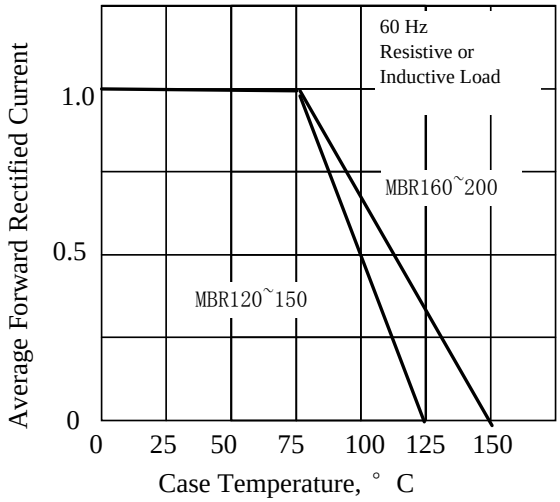


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

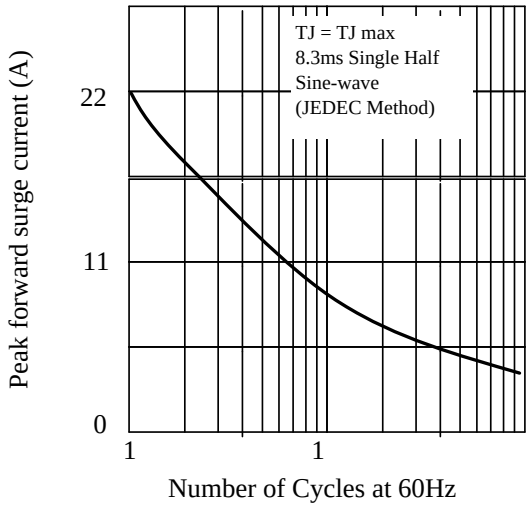


Fig 3. – Typical Instantaneous Forward Characteristics

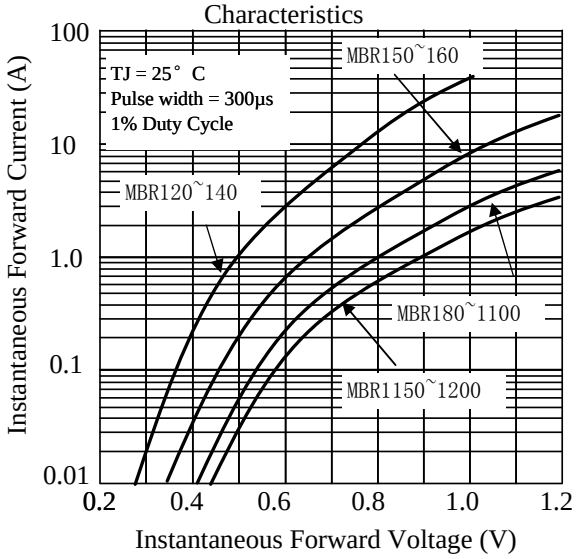


Fig 4. – Typical Reverse Characteristics

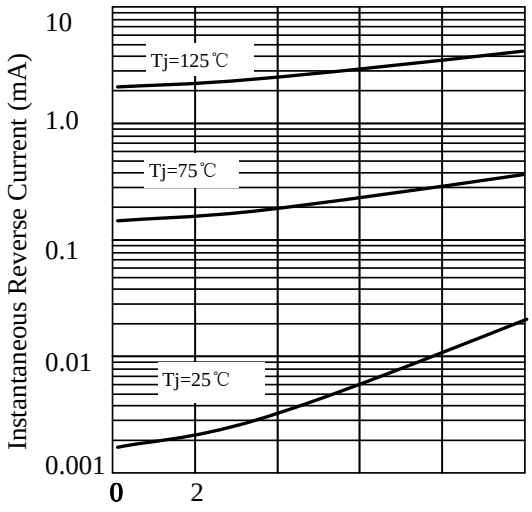


Fig 5. – typical transient thermal impedance

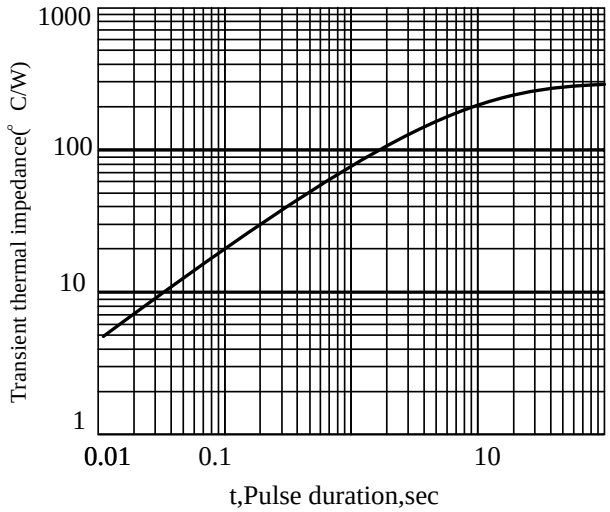
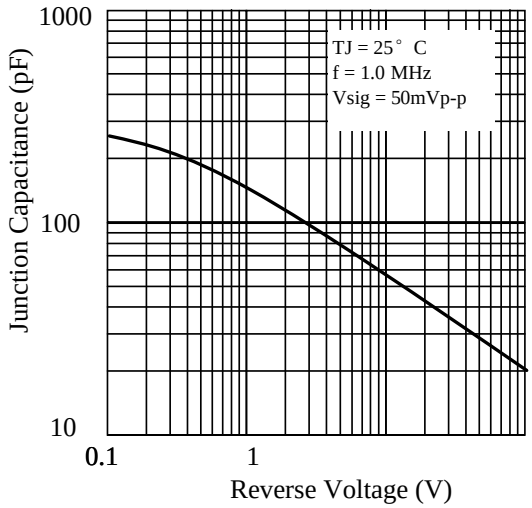
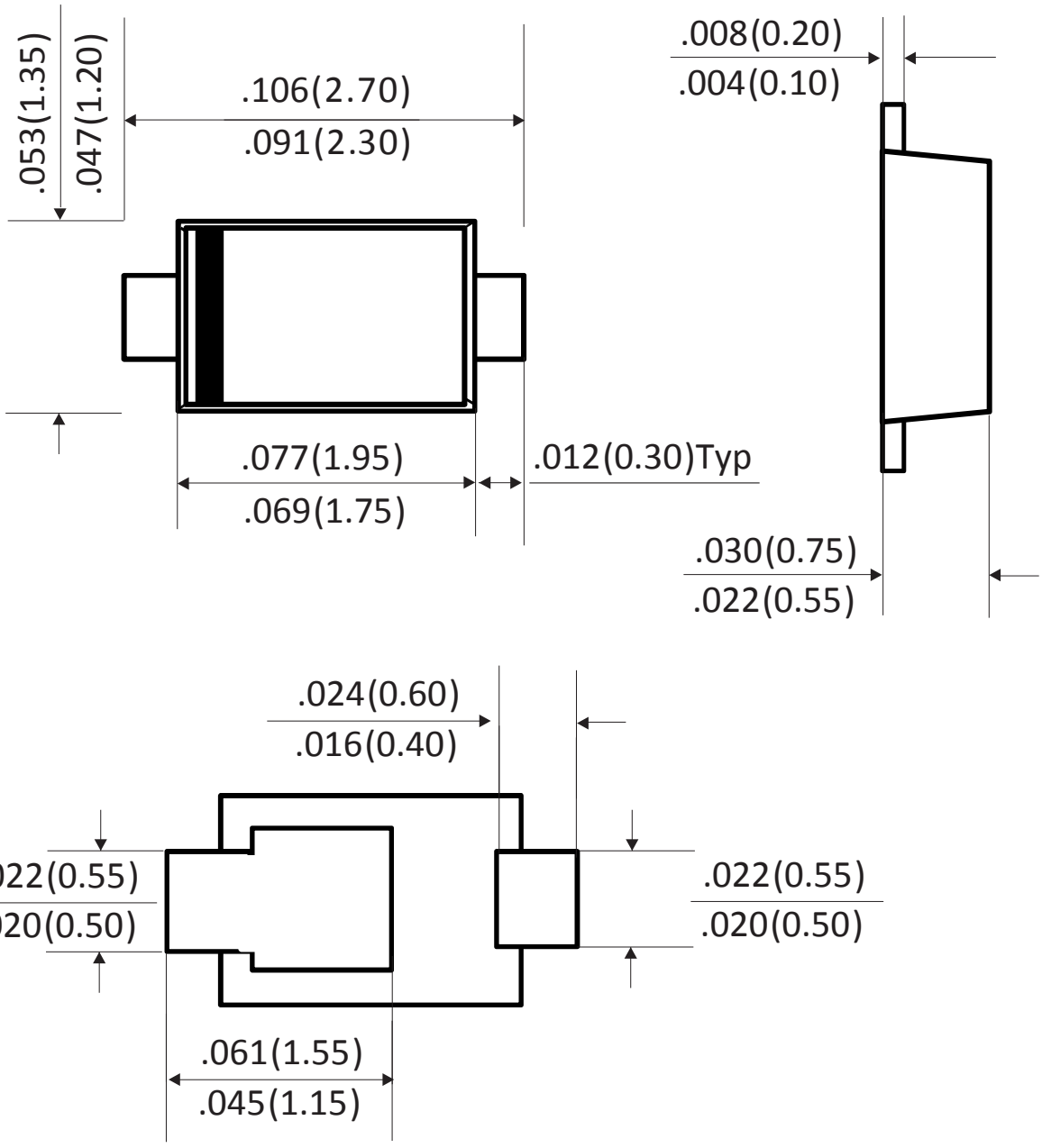


Fig 6. – Typical Junction Capacitance



Outline Drawing

SOD-323HE



Dimensions in inches and (millimeters)

Rev. A

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Ordering Information:

Device PN	Marking(4)	Packing
tl·NŰ bdzYõŜW(1)H(2)-WS(3)	See Page.1	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Packing code suffix ”G”for RoHS product ； Packing code Suffix"H" for halogen free product. All materials and products supplied comply with the U.S. Toxic Substances Control Act statement, PBT Chemicals.

(3) Willas brand abbreviation, Label Type does not display

(4) There may be additional marking, which relates to the lot trace code information (data code and vendor code), the logo or the environmental category on the device