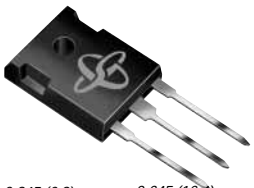
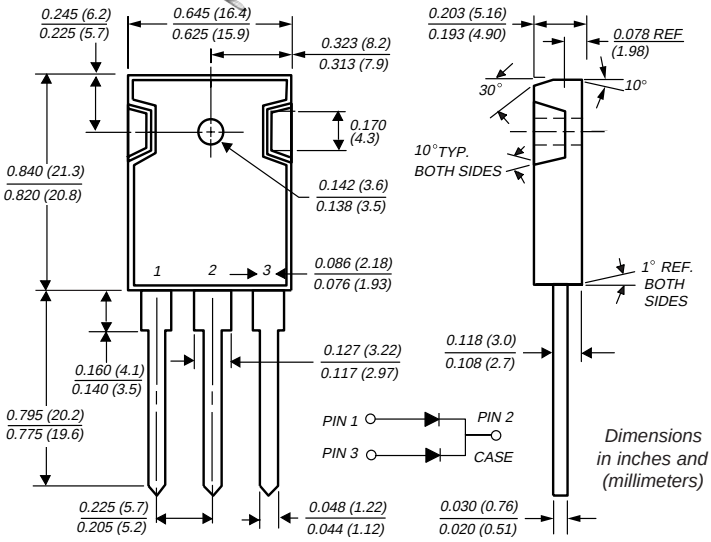
High Voltage Dual Schottky Rectifier

Rev. Voltage 90 to 100 V
Forward Current 30A



TO-247AD



Features

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Dual rectifier construction, positive center-tap
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free-wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds, 0.17" (4.3mm) from case

Mechanical Data

Case: JEDEC TO-247AD molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked **Mounting Position:** Any
Mounting Torque: 10 in-lbs max.
Weight: 0.2oz., 5.6g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	MBR3090PT	MBR30100PT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	90	100	V
Maximum working peak reverse voltage	V_{RWM}	90	100	V
Maximum DC blocking voltage	V_{DC}	90	100	V
Maximum average forward rectified current (SEE FIG. 1)	$I_{F(AV)}$	30		A
Peak repetitive forward current per leg at T_C=105°C (rated V_R, square wave, 20 KHz)	I_{FRM}	30		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	TBD		A
Peak repetitive reverse surge current (NOTE 1)	I_{RRM}	0.5		A
Thermal resistance from junction to case per leg	$R_{\Theta JC}$	1.4		°C/W
Voltage rate of change at (rated V_R)	dv/dt	10,000		V/μs
Maximum operating junction temperature	T_J	150		°C
Storage temperature range	T_{STG}	–65 to +175		°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	MBR3090PT	MBR30100PT	Unit
Maximum instantaneous forward voltage per leg at: (NOTE 2)	I_F = 15A, T_C = 25°C I_F = 15A, T_C = 125°C	V_F	0.85 0.75		V
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2)	T_C = 25°C T_C = 125°C	I_R	1.0 60		mA

Notes: (1) 2.0μs pulse width, f = 1.0 KHz
(2) Pulse test: 300μs pulse width, 1% duty cycle