

MBRS735 THRU MBR760

SCHOTTKY BARRIER RECTIFIER



康比電子
HORNBY ELECTRONIC

REVERSE VOLTAGE: 35 to 60 VOLTS

FORWARD CURRENT: 7.5 AMPERE

FEATURES

- For surface mounted application
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- For use in low voltage,high frequency inverters,free whelling,and polarity protection applications
- High temperature soldering guaranteed:
250°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

Case: Molded plastic, D²PAK

Epoxy: UL 94V-O rate flame retardant

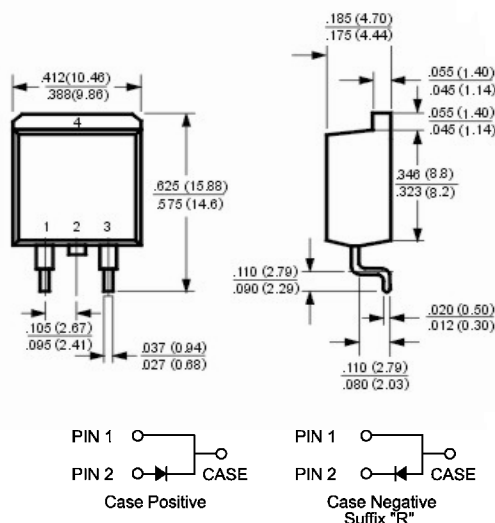
Terminals: Leads solderable per MIL-STD-202
method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.06ounce, 1.70gram

D²PAK



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	MBRS735	MBRS745	MBRS750	MBRS760	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	Volts
Maximum RMS Voltage	V _{RMS}	24	31	35	42	Volts
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	Volts
Maximum Average Forward Rectified Current See Fig. 1	I _(AV)	7.5				Amp
Peak repetitive forward current (sq. wave, 20 KHz) at T _C = 105°C	I _{FRM}	15				Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150				Amp
Peak repetitive reverse current at tp = 2.0μs, 1KHz	I _{RRM}	1.0		0.5		Amp
Maximum Forward Voltage (Note 1)	V _F					Volts
at I _F = 7.5A, T _C = 25°C		-		0.75		
at I _F = 7.5A, T _C = 125°C		0.57		0.65		
at I _F = 15A, T _C = 25°C		0.84		-		
at I _F = 15A, T _C = 125°C		0.72		-		
Maximum Reverse Current at T _C =25°C	I _R	0.1		0.5		mAmp
at Rated DC Blocking Voltage T _C =125°C		15		50		
Voltage rate of change (rated V _R)	dv/dt	10,000				V/μs
Typical Thermal Resistance	R _{θJC}	3.0				°C/W
Operating Temperature Range	T _J	-55 to +150				°C
Storage Temperature Range	T _{stg}	-55 to +175				°C

NOTES:

1- Pulse test: 300μs pulse width, 1% duty cycle

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 – Forward Current Derating Curve

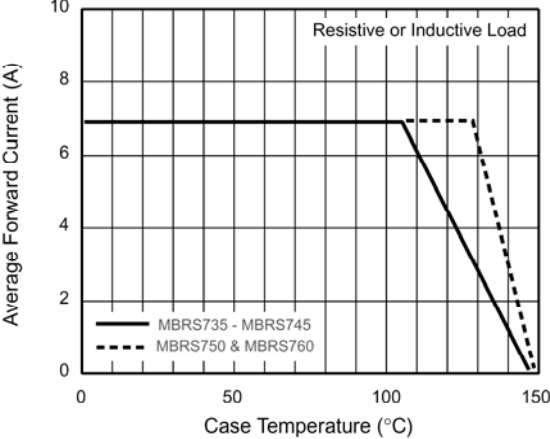


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

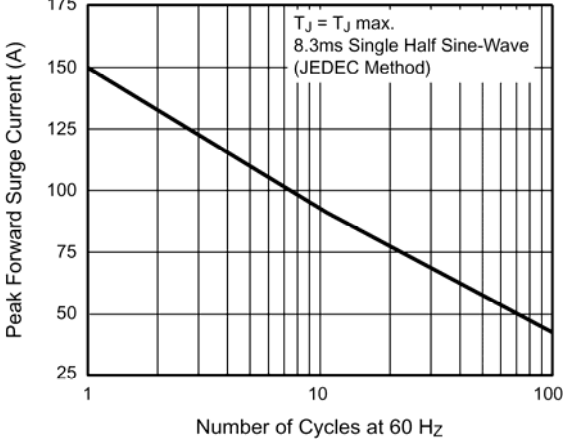


Fig. 3 – Typical Instantaneous Forward Characteristics

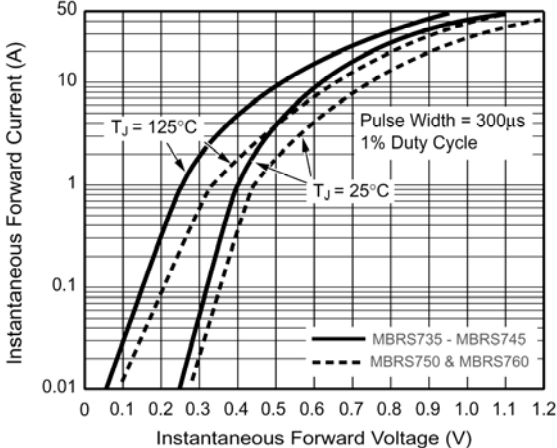


Fig. 4 – Typical Reverse Characteristics

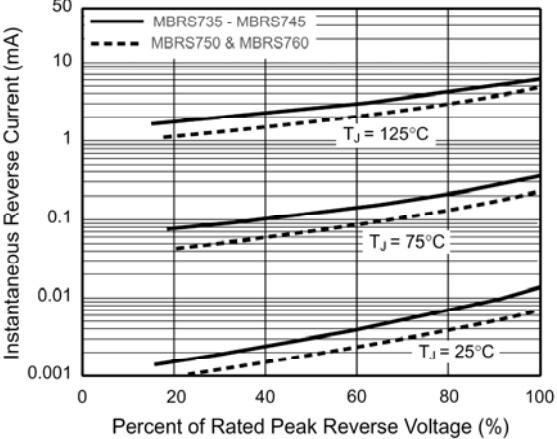


Fig. 5 – Typical Junction Capacitance

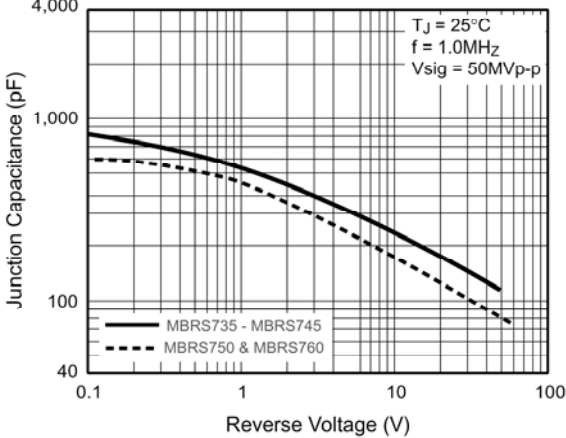


Fig. 6 – Typical Transient Thermal Impedance

