

10A SURFACE MOUNT DUAL SCHOTTKY BARRIER RECTIFIER

Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- Very Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, OR'ing, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

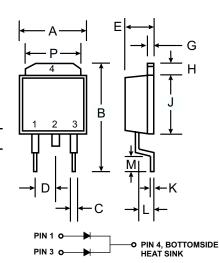
Case: DPAK Molded Plastic

Terminals: Solderable per MIL-STD-202,

Method 208

Polarity: See DiagramMarking: See Sheet 2Weight: 0.4 grams (approx.)

• Ordering Information: See Below



DPAK					
Dim	Min Max				
Α	6.3	6.7			
В	_	10			
С	0.3	0.8			
D	2.3 Nominal				
E	2.1	2.5			
G	0.4	0.6			
Н	1.2	1.6			
J	5.3	5.7			
K	0.5 Nominal				
L	1.3	1.8			
М	1.0				
Р	5.1	5.5			
All Dimensions in mm					

Maximum Ratings @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _R	35	V
RMS Reverse Voltage		$V_{R(RMS)}$	25	V
Average Rectified Output Current (See Figure 4)	Per Leg Per Package	lo	5 10	Α
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load Per Package (JEDEC Method)		I _{FSM}	75	А
Typical Thermal Resistance Junction to Case Bottom Side Per Leg (Note 1)		$R_{ hetaJC}$	2.43	°C/W
Voltage Rate of Change @ V _R = 35V, T _j = 25°C		dv/dt	10,000	V/μs
Operating Temperature Range		Tj	-55 to +125	°C
Storage Temperature Range		T _{STG}	-55 to +125	°C

Notes: 1. Device mounted on PC board with 14mm^2 (.013mm thick) copper pad areas.

Ordering Information (Note 2)

Device	Packaging	Shipping
MBRD1035CTL-T	DPAK	2500/Tape & Reel

Notes: 2. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

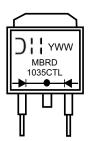
Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	35		_	V	$I_R = 500 \mu A$
Forward Voltage (Note 3)	V _{FM}			0.47 0.41 0.56 0.55	V	$\begin{array}{l} I_F = 5A, \ T_S = \ 25^{\circ}C \\ I_F = 5A, \ T_S = 100^{\circ}C \\ I_F = 10A, \ T_S = \ 25^{\circ}C \\ I_F = 10A, \ T_S = 100^{\circ}C \\ \end{array}$
Peak Reverse Current (Note 3)	I _{RM}		0.04 — —	2.0 30 200 5	mA mA μA mA	$\begin{array}{l} V_R = 35 V, \ T_j = 25^{\circ} C \\ V_R = 35 V, \ T_j = 100^{\circ} C \\ V_R = 17.5 V, \ T_j = 25^{\circ} C \\ V_R = 17.5 V, \ T_j = 100^{\circ} C \end{array}$
Typical Junction Capacitance	Cj	_	340	_	pF	f = 1.0MHz, V _R = 4.0V DC

Notes:

- 1. Device mounted on PC board with 14mm² (.013mm thick) copper pad areas.
- 2. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
- 3. Short duration pulse test used to minimize self-heating effect.

Marking Information



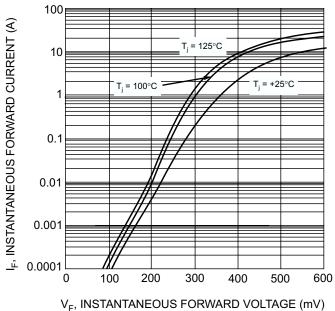
MBRD1035CTL = Product type marking code

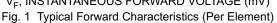
O|| = Manufacturers' code marking

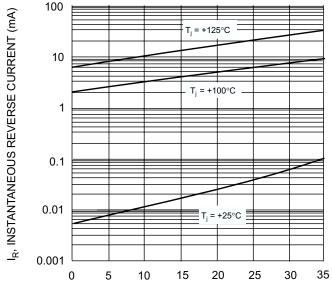
YWW = Date code marking

Y = Last digit of year ex: 2 for 2002

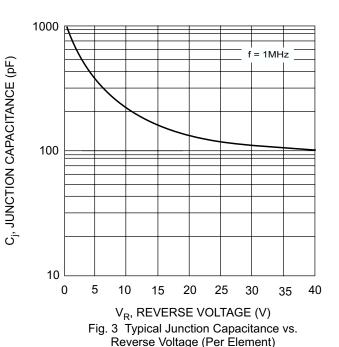
WW = Week code 01 to 52







V_R, INSTANTANEOUS REVERSE VOLTAGE (V) Fig. 2 Typical Reverse Characteristics (Per Element)



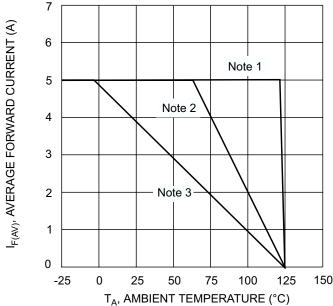
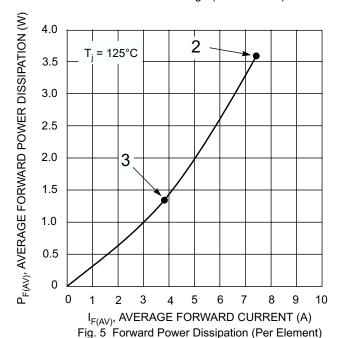


Fig. 4 DC Forward Current Derating (Per Element)



Notes: 1. $T_A = T_{SOLDERING\ POINT}$, $R_{\theta JC} = 2.43^{\circ} C/W$, $R_{\theta CA} = 0^{\circ} C/W$.

- Device mounted on GETEK substrate, 2"x2", 2 oz. copper, double-sided, cathode pad dimensions 0.75" x 1.0", anode pad dimensions 0.25" x 1.0". R_{θJA} in range of 15-30°C/W.
- Device mounted on FR-4 substrate, 2"x2", 2 oz. copper, single-sided, pad layout as per Diodes Inc. suggested pad layout document AP02001 which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. R_{θJA} in range of 60-75°C/W.