

MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

89 DE 6367255 0077433 8

2KBP005
THRU
2KBP06

Integral Glass Passivated Diode Assemblies

... diffused glass passivated silicon dice interconnected and molded into rectifier circuit assemblies for use in application where high output current/size ratio is of prime importance. These devices feature:

- Void-free, Molded Encapsulation to Assure High Resistance to Shock, Vibration, and Temperature Extremes
- High Dielectric Strength
- Simple, Compact Structure for Trouble-free Performance
- Ideally Suited for P.C. Board Mounting
- High Surge Capability — 60 Amps
- Compatible with Automatic Assembly Techniques

Mechanical Characteristics:

CASE: Premolded plastic housing

POLARITY: Terminal designation on case

(+) for DC output

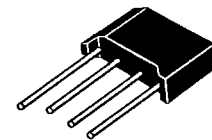
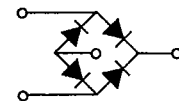
(-) for DC output

(AC) for AC input

MOUNTING POSITION: Any

WEIGHT: 2.74 grams (approx.)

TERMINALS: Readily solderable connections, corrosion resistant.

SINGLE-PHASE
FULL-WAVE BRIDGE
2 AMPERES
50-600 VOLTS


CASE 377A-01

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Rating (Per Diode)	Symbol	2KBP					Unit
		005	01	02	04	06	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	Volts
Sine Wave RMS Input Voltage	$V_R(\text{RMS})$	35	70	140	280	420	Volts
Average Rectified Forward Current (single phase bridge operation, resistive load, 60 Hz, $T_A = 50^\circ\text{C}$)	I_O	2					Amps
Non-Repetitive Peak Surge Current (Preceded and followed by rated current and voltage, $T_A = 50^\circ\text{C}$)	I_{FSM}	60 (for 1 cycle)					Amps
Storage Junction Temperature Range	T_{stg}	-55 to +150					$^\circ\text{C}$
Operating Temperature Range	T_J	-55 to +125					$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Typ	Max	Unit
Instantaneous Forward Voltage (Per Diode) ($i_F = 1$ Amp, $T_J = 25^\circ\text{C}$)	V_F	0.87	1	Volts
Reverse Current at Rated DC Blocking Voltage Per Diode	I_R	@ $T_A = 25^\circ\text{C}$	10	μA
		@ $T_A = 100^\circ\text{C}$	1	mA


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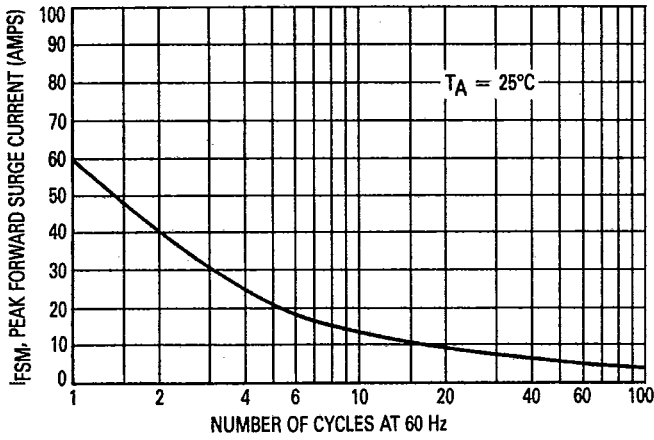


Figure 1. Maximum Non-Repetitive Forward Surge Current

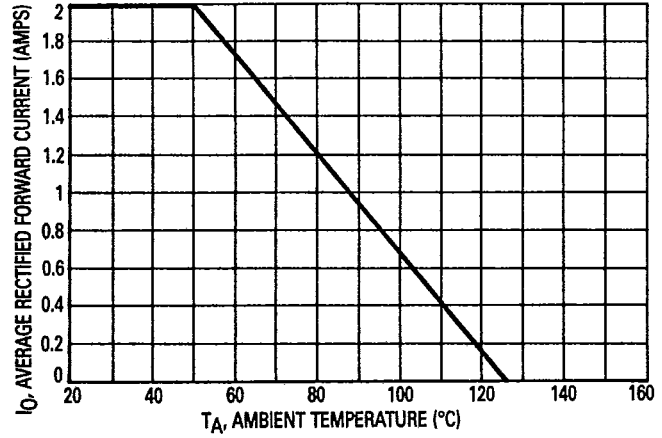


Figure 2. Forward Current Derating Curve

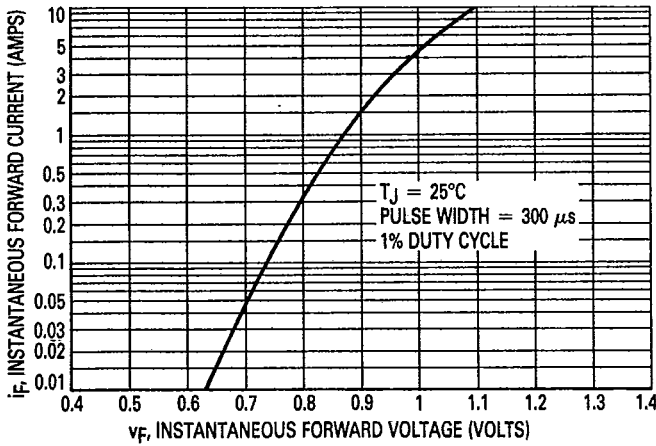


Figure 3. Typical Instantaneous Forward Per Bridge Diode

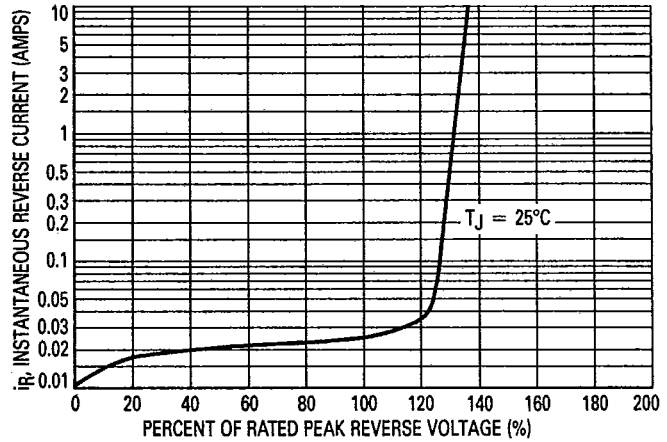


Figure 4. Typical Reverse Characteristics Per Diode

OUTLINE DIMENSIONS

NOTES:

- POSITIONAL TOLERANCE FOR DIMENSION ϕD (4 PL): $\pm \phi 0.25 (0.010) \text{ (M) A (M)}$
- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- CONTROLLING DIMENSION: INCH.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	15.75	16.07	0.620	0.633
B	9.55	9.90	0.376	0.390
C	3.81	4.08	0.150	0.161
D	0.74	0.83	0.029	0.033
F	2.67 BSC		0.105 BSC	
G	3.81 BSC		0.150 BSC	
K	9.91	13.41	0.390	0.528
L	1.50	3.50	0.059	0.138
R	8.85	9.01	0.335	0.355

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