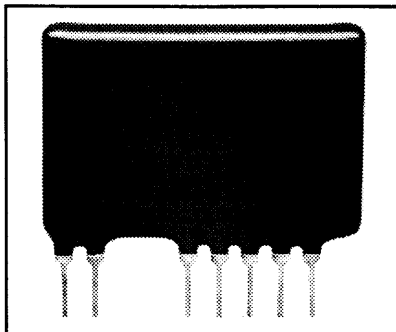
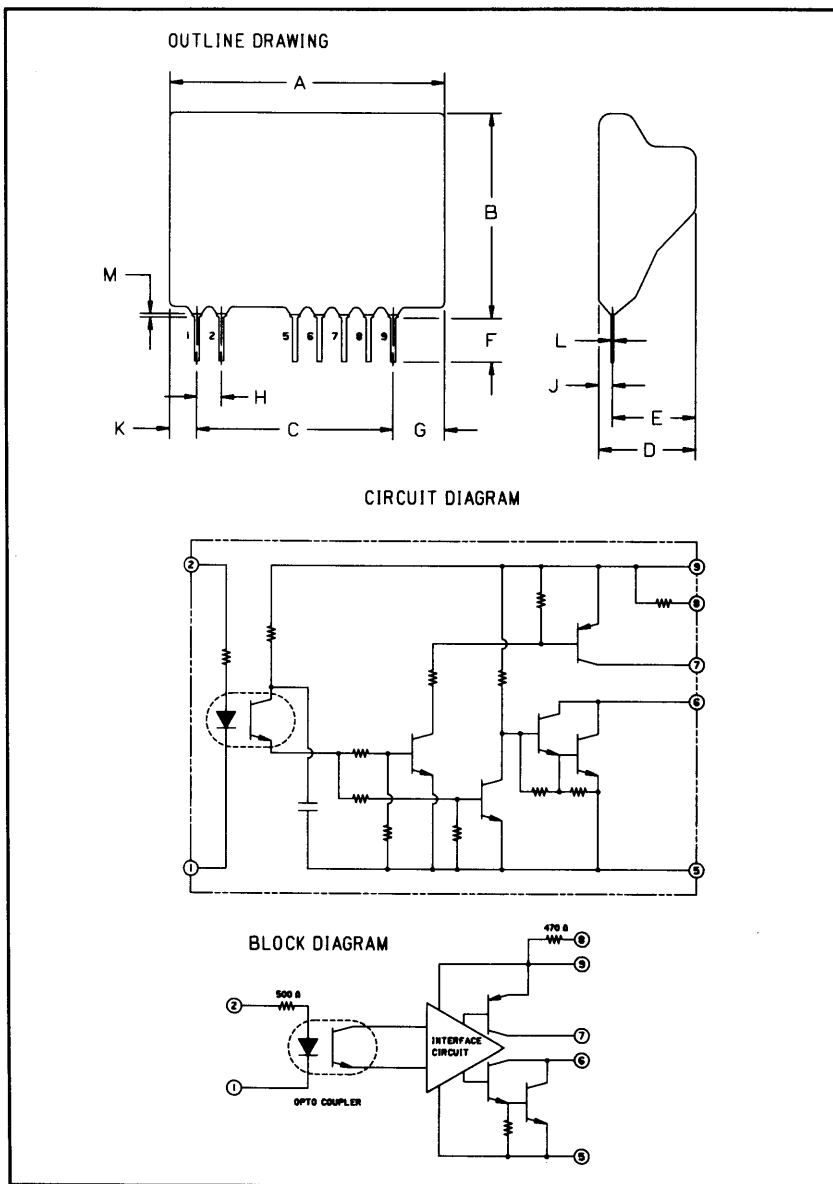


Hybrid IC Base Drive Module 0.5 Amperes/8 Volts



Description:

The Powerex Hybrid IC's are designed to provide logic compatible drive for transistor modules. The module includes an integral optoisolator for electrical isolation between input and output.

Features:

- ☐ Small, Lightweight
- ☐ Low Power Consumption
- ☐ TTL Logic Compatible
- ☐ Input/Output Electrically Isolated
- ☐ Single In-line Package
- ☐ Single Power Supply Drive
- ☐ Reverse Base Current Pulse Capability

Applications:

- ☐ Transistor Base Drive

Ordering Information:

The M57915L is a 2500 Volt, dielectric drive module suitable for driving 1000 Volt transistor modules rated at up to 20 Amperes.

Outline Drawing

Dimensions	Inches	Millimeters
A	1.12 Max.	28.5 Max.
B	0.83 Max.	21 Max.
C	0.80 ± 0.012	20.32 ± 0.3
D	0.39 Max.	10 Max.
E	0.34 Max.	8.5 Max.
F	0.18 ± 0.06	4.5 ± 1.5

Dimensions	Inches	Millimeters
G	0.16 +0.06/-0.04	4 +1.5/-1.0
H	0.100 ± 0.004	2.54 ± 0.1
J	0.71 Max.	1.8 Max.
K	0.059 +0.06/-0.04	1.5 +1.5/-1.0
L	0.014 ± 0.008	0.35 ± 0.2
M	0.008 Max.	0.2 Max.

Type	Package	Optoisolator
M57915L	10-pin SIL	Yes



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272

M57915L
Hybrid IC Base Drive Module
0.5 Amperes/8 Volts

Absolute Maximum Ratings, $T_A = 20^\circ\text{C}$ to 70°C unless otherwise specified

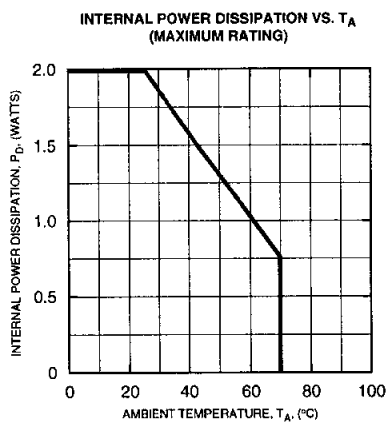
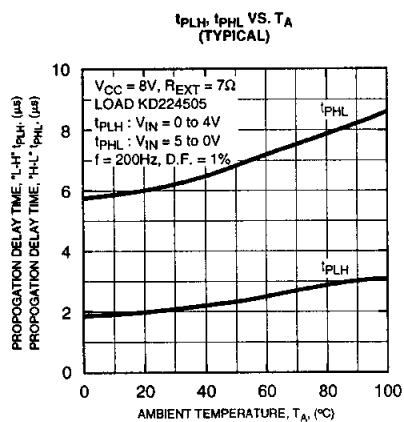
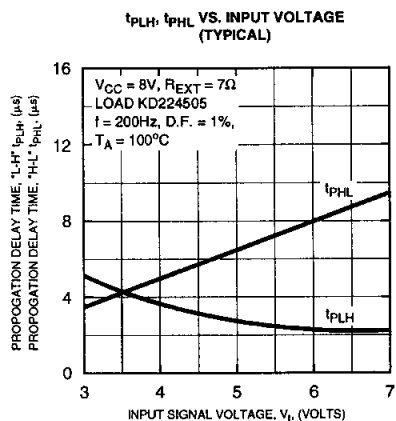
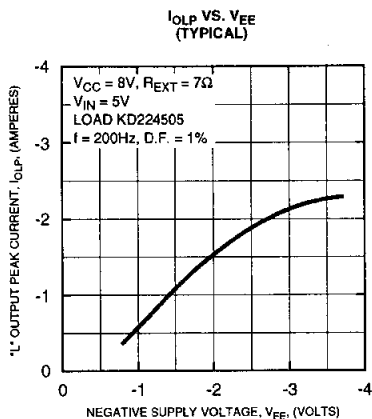
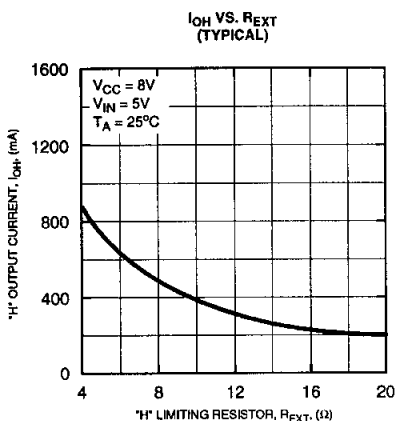
Ratings	Symbol	M57915L	Units
Junction Temperature	T_J	100	$^\circ\text{C}$
Operating Temperature Substrate	T_S	-25 to 100	$^\circ\text{C}$
Operating Temperature Ambient	T_A	-20 to 70	$^\circ\text{C}$
Supply Voltage	V_{CC}	14	Volts
Input Voltage	V_I	-1 to 7	Volts
"H" Output Current	I_{OH}	1	Amperes
"L" Output Peak Current*	I_{OLP}	-3	Amperes
V Isolation	V_{RMS}	2500	Volts

* Pulse Width 10 μs , $f = 2\text{kHz}$

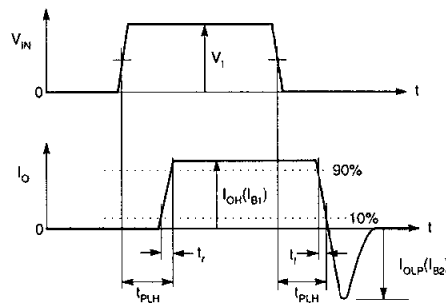
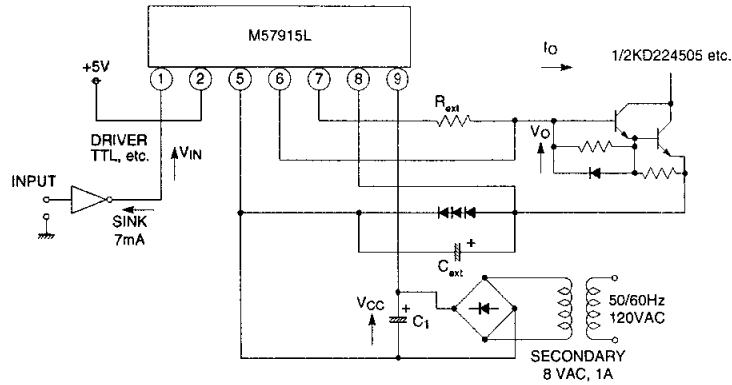
Electrical and Mechanical Characteristics, $T_A = 25^\circ\text{C}$, $V_{CC} = 8\text{V}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
"H" Input Current	I_{IH}	$V_I = 5\text{V}$	—	7	—	mA
"H" Output Current	I_{OH}	$R_{EXT} = 7\Omega$, $C_{EXT} = 47\mu\text{f}$	—	0.5	—	Amperes
"L" Output Peak Current	I_{OLP}	$R_{EXT} = 7\Omega$, $C_{EXT} = 47\mu\text{f}$	—	-1	—	Amperes
"L" - "H" Propagation Delay	t_{PLH}	$T_S = 100^\circ\text{C}$, $V_{IN} = 0$ to 4V	—	5	10	μs
"L" - "H" Rise Time	t_r	$T_S = 100^\circ\text{C}$, $V_{IN} = 0$ to 4V	—	—	1	μs
"H" - "L" Propagation Delay	t_{PHL}	$T_S = 100^\circ\text{C}$, $V_{IN} = 5$ to 0V	—	8	15	μs
"H" - "L" Fall Time	t_f	$T_S = 100^\circ\text{C}$, $V_{IN} = 5$ to 0V	—	—	2	μs
Internal Power Dissipation	P_D	$I_{OH} = 0.5\text{A}$, $I_{OLP} = -1\text{A}$, $f = 2\text{kHz}$, Duty = 50%	—	0.8	—	Watts

M57915L
Hybrid IC Base Drive Module
 0.5 Amperes/8 Volts



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NOTE: I_{OH} AND I_{OLP} CORRESPOND TO BASE FORWARD CURRENT I_{B1} AND BASE REVERSE CURRENT I_{B2} OF THE TRANSISTOR MODULE TO BE DRIVEN RESPECTIVELY.