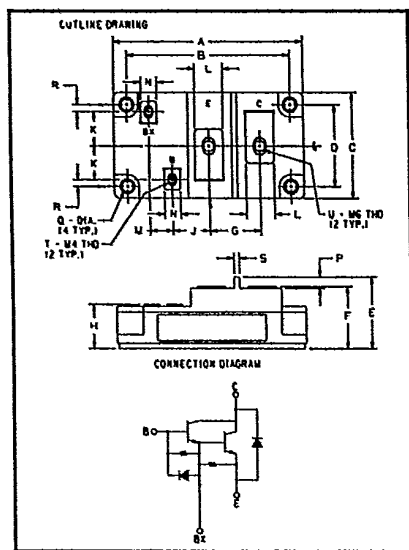
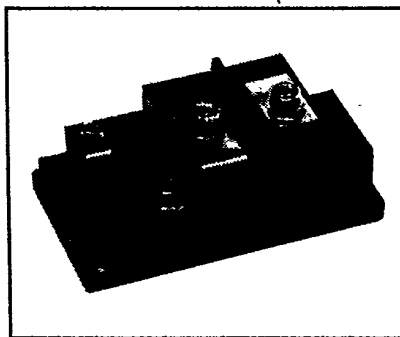


POWEREX**KS621A40 Tentative**

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

**Fast Switching
Single Darlington
Transistor Module
400 Amperes/125 Volts****125 Volt KS621A40
Outline Drawing**

Dimension	Inches	Millimeters
A	4.252 Max.	108 Max.
B	3.661 ± .012	93 ± 0.3
C	2.441 Max.	62 Max.
D	1.890 ± .012	48 ± 0.3
E	1.634 Max.	41.5 Max.
F	1.417 Max.	36 Max.
G	1.142	29
H	1.004	25.5 Max.
J	.827	21
K	.787	20
L	.630	16
M	.512	13
N	.354	9
P	.256	6.5
Q	.256 Dia.	6.5 Dia.
R	.157	4
S	.118	3
T	M4 Metric	M4
U	M6 Metric	M6

**KS621A40
Fast Switching Single Darlington
Transistor Module
400 Amperes/125 Volts****Description**

Powerex Fast Switching Single Transistor Modules are designed for use in Low Voltage switching applications. The modules are isolated for easy mounting of multiple units.

Features:

- ☐ Isolated Mounting
- ☐ Planar Chips
- ☐ Low $V_{CE(SAT)}$
- ☐ Fast Switching

Applications:

- ☐ 20 KiloHertz Inverters
- ☐ AC & DC Motor Control
- ☐ Switching Power Supplies

Ordering Information

Example: Select the complete eight digit module part number for the rating you desire from the table - i.e. KS621A40 is a 125 Volt, 400 Ampere Fast Switching Single Darlington Module.

Type	$V_{CEO(SUS)}$ Volts (125)	Current Rating Amperes (×10)
KS62	1A	40



Tentative

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

KS621A40**Fast Switching Single Darlington Transistor Module**
400 Amperes/125 Volts**Maximum Ratings $T_J = 25^\circ\text{C}$ unless otherwise specified**

	Symbol	KS621A40	Units
Junction Temperature	T_J	-40 to 150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to 125	$^\circ\text{C}$
Collector-Emitter Sustaining Voltage	$V_{CE(SUS)}$	125	Volts
Collector-Base Voltage	V_{CBO}	150	Volts
Emitter-Base Voltage	V_{EBO}	7	Volts
Collector-Emitter Voltage $V_{BE} = -2\text{V}$	V_{CEV}	150	Volts
Continuous Collector Current	I_C	400	Amperes
Diode Forward Current	I_{FM}	400	Amperes
Continuous Base Current	I_B	10	Amperes
Diode Surge Current	I_{FSM}	4000	Amperes
Power Dissipation	P_T	1980	Watts
Max. Mounting Torque (M6) Terminal Screws	—	26	in.-lb.
Max. Mounting Torque (M6) Mounting Screws	—	26	in.-lb.
Max. Mounting Torque (M4) Terminal Screws, B, Bx	—	12	in.-lb.
Module Weight	—	460	Grams
V isolation	V_{RMS}	1500	Volts

Electrical and Mechanical Characteristics $T_J = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	KS621A40 Typ.	Max.	Units
Collector Cutoff Current	I_{CEV}	$V_{CE} = 150\text{V}, V_{BE} = -2\text{V}$	—	—	1	mA
Collector Cutoff Current	I_{CEV}	$V_{CE} = 150\text{V}, V_{BE} = -2\text{V}$ $T_C = 125^\circ\text{C}$	—	—	3	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7\text{V}$	—	—	200	mA
DC Current Gain	h_{FE}	$I_C = 400\text{A}, V_{CE} = 2.0\text{V}$	300	—	—	—
Diode Forward Voltage	V_{FM}	$I_{FM} = 400\text{A}$	—	—	1.60	V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 400\text{A}, I_B = 2.0\text{A}$	—	—	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = 400\text{A}, I_B = 2.0\text{A}$	—	—	2.0	V
Resistive Turn On	t_{on}	$V_{CC} = 75\text{V}$	—	—	2.0	μs
Load Storage Time	t_s	$I_C = 400\text{A}$	—	—	4.0	μs
Switch Times Fall Time	t_f	$I_{B1} = -I_{B2} = 2.0\text{A}$	—	—	2.0	μs
Thermal Resistance, Junction to Sink Lubricated	$R_{\theta CS}$	—	—	—	0.04	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Transistor Part	—	—	0.063	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Diode Part	—	—	0.3	$^\circ\text{C/W}$

This specification is tentative;
therefore, performance curves are not
included. Please contact the Powerex
sales representative nearest you for
further information.