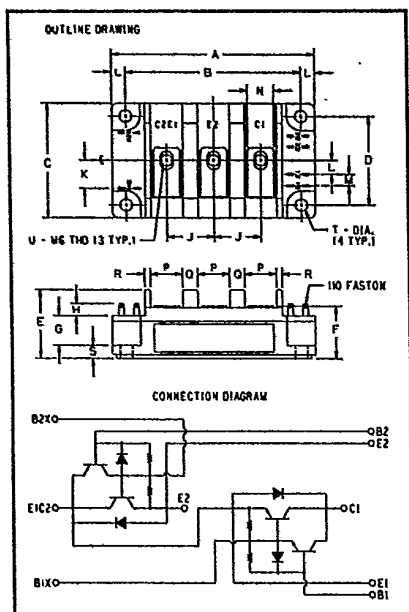




Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272

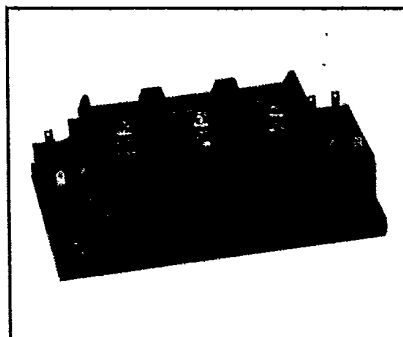
KD421A20 Tentative

**Fast Switching
Dual Darlington
Transistor Module
200 Amperes/125 Volts**



**125 Volt KD421A20
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	1.457	37
F	1.181 Max.	30 Max.
G	.630	16
H	.256 Min.	6.5 Min.
J	.984	25
K	.591	15
L	.295	7.5
M	.236	6
N	.551	14
P	.669	17
Q	.315	8
R	.118	3
S	.276	7
T	.256 Dia.	6.5 Dia.
U	M6 Metric	M6



**KD421A20
Fast Switching Dual Darlington
Transistor Module
200 Amperes/125 Volts**

Description

Powerex Fast Switching Dual Darlington 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. KD421A20 is a 125 Volt, 200 Ampere Fast Switching Dual Darlington Module.

Type	$V_{CEO(SUS)}$ Volts (125)	Current Rating Amperes ($\times 10$)
KD42	1A	20



Tentative

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

KD421A20

Fast Switching Dual Darlington Transistor Module
200 Amperes/125 VoltsMaximum Ratings $T_J = 25^\circ\text{C}$ unless otherwise specified

	Symbol	KD421A20	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	$V_{CEO(SUS)}$	125	Volts
Collector-Base Voltage	V_{CBO}	150	Volts
Emitter-Base Voltage	V_{EBO}	7	Volts
Collector-Emitter Voltage $V_{BE} = -2V$	V_{CEV}	150	Volts
Continuous Collector Current	I_C	200	Amperes
Diode Forward Current	I_{FM}	200	Amperes
Continuous Base Current	I_B	10	Amperes
Diode Surge Current	I_{FSM}	2000	Amperes
Power Dissipation	P_T	800	Watts
Max. Mounting Torque (M6) Terminal Screws	—	26	in.-lb.
Max. Mounting Torque (M6) Mounting Screws	—	26	in.-lb.
Module Weight	—	—	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.	KD421A20 Typ.	Max.	Units
Collector Cutoff Current	I_{CEV}	$V_{CE} = 150V, V_{BE} = -2V$	—	—	1	mA
Collector Cutoff Current	I_{CEV}	$V_{CE} = 150V, V_{BE} = -2V$ $T_C = 125^\circ\text{C}$	—	—	3	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7V$	—	—	200	mA
DC Current Gain	h_{FE}	$I_C = 200A, V_{CE} = 2.0V$	300	—	—	—
Diode Forward Voltage	V_{FM}	$I_{FM} = 200A$	—	—	1.60	V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 200A, I_B = 1.0A$	—	—	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = 200A, I_B = 1.0A$	—	—	2.0	V
Resistive Turn On	t_{on}	$V_{CC} = 75V$	—	—	2.0	μs
Load Storage Time	t_s	$I_C = 200A$	—	—	4.0	μs
Switch Times Fall Time	t_f	$I_{B1} = -I_{B2} = 1.0A$	—	—	2.0	μs
Thermal Resistance, Junction to Sink Lubricated	$R_{\theta CS}$	Per Half Module	—	—	0.075	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Transistor Part	—	—	0.155	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Diode Part	—	—	0.6	$^\circ\text{C/W}$

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