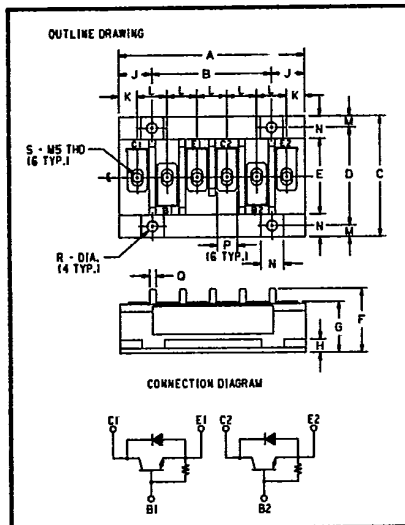
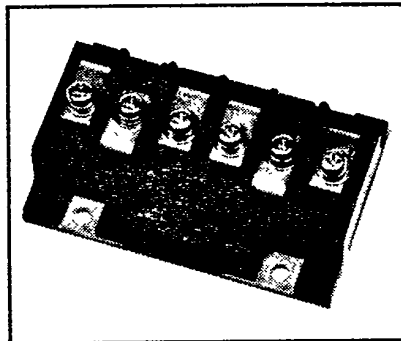


**POWEREX**

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

**KT234520****Split-Dual Bipolar Transistor Module**  
**200 Amperes/600 Volts****600 Volt KT234520**  
**Outline Drawing**

Dimension	Inches	Millimeters
A	3.858 ± .016	98 ± 0.4
B	2.48 ± .012	63 ± 0.3
C	2.52 ± .016	64 ± 0.4
D	2.047 ± .012	52 ± 0.3
E	1.575 ± .012	40 ± 0.3
F	1.339 Max.	34 Max.
G	1.063 + .02 / - .00	27 + 0.5 / - 0.0
H	.276	7
J	.689	17.5
K	.374	9.5
L	.622	15.8
M	.236	6
N	.472	12
P	.413 ± .008	10.5 ± 0.2
Q	.134	3.4
R	.216 ± .006 Dia.	5.5 ± 0.15 Dia.
S	M5 Metric	M5

**KT234520**  
**Split-Dual Bipolar Transistor Module**  
200 Amperes/600 Volts**Description**

Powerex Split-Dual Bipolar Transistor Modules are designed for use in switching applications. The modules are isolated consisting of two Bipolar Transistors with each transistor having a reverse parallel connected high-speed diode.

**Features:**

- Isolated Mounting
- Planar Chips
- Discrete Fast Recovery Feed-Back Diode
- Low  $V_{CE(SAT)}$
- Fast Switching

**Applications:**

- Inverters
- DC Motor Control
- Switching Power Supplies
- AC Motor Control

**Ordering Information**

Example: Select the complete eight digit module part number you desire from the table - i.e. KT234520 is a 450  $V_{CEQ(SUS)}$  (600  $V_{CEV}$ ), 200 Ampere Split-Dual Bipolar Module.

Type	$V_{CEQ(SUS)}$ Volts ( $\times 10$ )	Current Rating Amperes ( $\times 10$ )
KT23	45	20



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

KT234520

Split-Dual Bipolar Transistor Module  
200 Amperes/600 Volts

Maximum Ratings  $T_J = 25^\circ\text{C}$  unless otherwise specified

	Symbol	KT234520	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	$V_{CEO(SUS)}$	450	Volts
Collector-Emitter Sustaining Voltage $V_{BE} = -2V$	$V_{CEV(SUS)}$	600	Volts
Collector-Base Voltage	$V_{CBO}$	600	Volts
Emitter-Base Voltage	$V_{EBO}$	7	Volts
Collector-Emitter Voltage $V_{BE} = -2V$	$V_{CEV}$	600	Volts
Continuous Collector Current	$I_C$	200	Amperes
Diode Forward Current	$I_{FM}$	30	Amperes
Continuous Base Current	$I_B$	30	Amperes
Diode Surge Current	$I_{FSM}$	300	Amperes
Power Dissipation	$P_T$	830	Watts
Max. Mounting Torque M5 Terminal Screws	—	17	in-lb
Max. Mounting Torque M5 Mounting Screws	—	17	in-lb
Module Weight	—	420	Grams
V isolation	$V_{RMS}$	2500	Volts

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

Characteristics	Symbol	Test Conditions	Min.	KT234520 Typ.	Max.	Units
Collector Cutoff Current	$I_{CEV}$	$V_{CE} = 600V, V_{BE} = -2V$	—	—	2	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 7V$	—	—	300	mA
DC Current Gain	$h_{FE}$	$I_C = 200A, V_{CE} = 2V$	10	—	—	—
Diode Forward Voltage	$V_{FM}$	$I_{FM} = 30A$	—	—	1.8	V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 200A, I_B = 20A$	—	—	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = 200A, I_B = 20A$	—	—	2.2	V
Resistive Turn On	$t_{on}$	$V_{CC} = 300V$	—	—	2.5	$\mu\text{s}$
Load Storage Time	$t_s$	$I_C = 200A$	—	—	7	$\mu\text{s}$
Switch Times Fall Time	$t_f$	$I_{B1} = -I_{B2} = 20A$	—	—	1.0	$\mu\text{s}$
Thermal Resistance, Case to Sink Lubricated	$R_{\theta CS}$	Per Half Module	—	—	0.1	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Transistor Part	—	—	0.15	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Diode Part	—	—	0.6	$^\circ\text{C/W}$