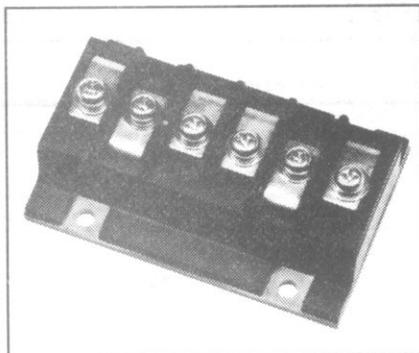
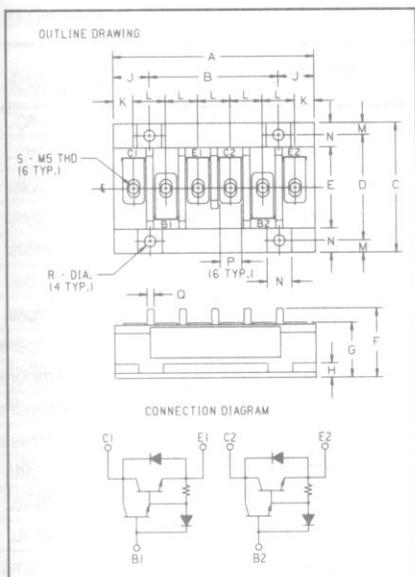


Mitsubishi QM150DX-H was sold in USA as KT224515
the parts are technically 100 % identical

KT224515

Split-Dual Darlington Transistor Module 150 Amperes/600 Volts



KT224515
Split-Dual Darlington
Transistor Module
150 Amperes/600 Volts

600 Volt KT224515 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/-0.00	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

Description

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

Features:

- Isolated Mounting
- Planar Chips
- Discrete Fast Recovery Feed-Back Diode
- High Gain (h_{FE})
- Base Emitter Speed Up Diode

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. KT224515 is a 450 $V_{CE0(SUS)}$ (600 V_{CEV}), 150 Ampere Split-Dual Darlington Module.

Type	$V_{CE0(SUS)}$ Volts ($\times 10$)	Current Rating Amperes ($\times 10$)
KT22	45	15



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

KT224515

Split-Dual Darlington Transistor Module

150 Amperes/600 Volts

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

	Symbol	KT224515	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	$V_{CEQ(SUS)}$	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_{CEV}	600	Volts
Continuous Collector Current	I_C	150	Amperes
Diode Forward Current	I_{FM}	150	Amperes
Continuous Base Current	I_B	9	Amperes
Diode Surge Current	I_{FSM}	1500	Amperes
Power Dissipation, Each Transistor	P_T	690	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}	2000	Volts



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KT224515
Split-Dual Darlington Transistor Module
150 Amperes/600 Volts

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

Characteristics	Symbol	Test Conditions	KT224515			Units	
			Min.	Typ.	Max.		
Collector Cutoff Current	I_{CEV}	$V_{CE} = 600V, V_{BE} = -2V$	—	—	2	mA	
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7V$	—	—	350	mA	
DC Current Gain	h_{FE}	$I_C = 150A, V_{CE} = 5V$	100	—	—	—	
Diode Forward Voltage	V_{FM}	$I_{FM} = 150A$	—	—	1.85	V	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 150A, I_B = 3.0A$	—	—	2.0	V	
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = 150A, I_B = 3.0A$	—	—	2.5	V	
Resistive Load	Turn On	t_{on}	$V_{CC} = 300V$	—	—	2.5	μs
	Storage Time	t_s	$I_C = 150A$	—	—	12	μs
Switch Times	Fall Time	t_f	$I_{B1} = -I_{B2} = 3.0A$	—	—	3.0	μs
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	—	—	0.18	$^\circ\text{C/W}$	
Thermal Resistance, Junction to Case	$R_{\theta JC}$	Diode Part	—	—	0.6	$^\circ\text{C/W}$	