FAIRCHILD SEMICONDUCTOR®

July 2008

Power-SPM™

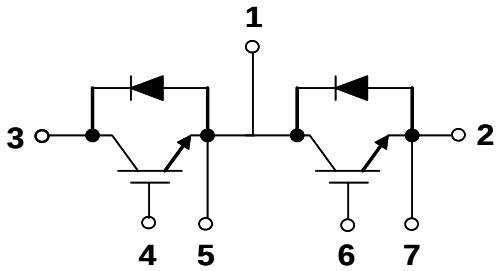
FP7G75US60

Transfer Molded Type IGBT Module

General Description

Fairchild's New IGBT Modules (Transfer Molded Type) provide low conduction and switching losses as well as short circuit ruggedness. They are designed for applications such as Motor control, Uninterrupted Power Supplies (UPS) and general Inverters where short circuit ruggedness is a required feature.

Package Code : EPM7



Internal Circuit Diagram

Features

- Short Circuit rated 10us @Tc=100°C, Vge=15V
- High Speed Switching
- Low Saturation Voltage : Vce(sat) =2.2V @Ic=75A
- High Input Impedance
- Fast & Soft Anti-Parallel FWD

Application

- Welders
- AC & DC Motor Controls
- General Purpose Inverters
- Robotics
- Servo Controls
- UPS

Absolute Maximum Ratings

Symbol	Description		Rating	Units
V_{CES}	Collector-Emitter Voltage		600	V
V_{GES}	Gate-Emitter Voltage		± 20	V
I_C	Collector Current	@ T_C = 25°C	75	A
$I_{CM\ (1)}$	Pulsed Collector Current		150	A
I_F	Diode Continuous Forward Current	@ T_C = 100°C	75	A
I_{FM}	Diode Maximum Forward Current		150	A
T_{SC}	Short Circuit Withstand Time	@ T_C = 100°C	10	us
P_D	Maximum Power Dissipation	@ T_C = 25°C	310	W
T_J	Operating Junction Temperature		-40 to +125	°C
T_{stg}	Storage Temperature Range		-40 to +125	°C
V_{iso}	Isolation Voltage	@ AC 1minute	2500	V
Mounting Torque	Power Terminals Screw : M5		2.0	N.m
	Mounting Screw : M5		2.0	N.m

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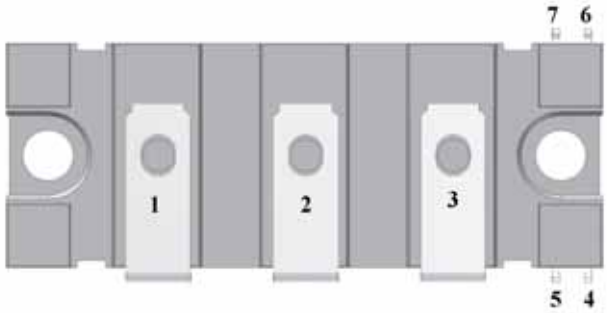
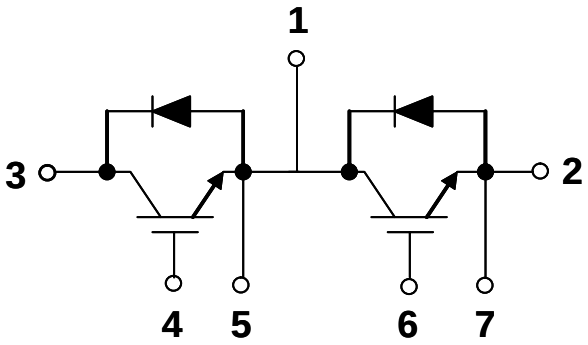
Pin Configuration and Pin Description



Top View



Internal Circuit Diagram

Pin Description

Pin Number	Pin Description
1	Emitter of Q1, IGBT, Collector of Q2, IGBT
2	Emitter of Q2, IGBT
3	Collector of Q1, IGBT
4	Gate of Q1, IGBT
5	Emitter of Q1, IGBT
6	Gate of Q2, IGBT
7	Emitter of Q2, IGBT