FAIRCHILD SEMICONDUCTOR®

August 2005

FMS7G15US60
Compact & Complex Module

Features

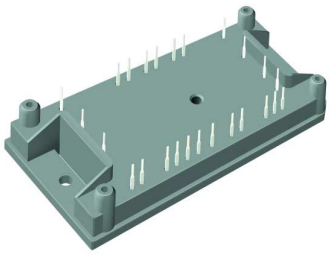
- Short Circuit rated 10µs @ T_C = 100°C, V_{GE} = 15V
- High Speed Switching
- Low Saturation Voltage : V_{CE}(sat) = 2.1 V @ I_C = 15A
- High Input Impedance
- Built in Brake & 3 Phase Rectifier Circuit
- Fast & Soft Anti-Parallel FWD
- Built-in NTC Thermistor

Applications

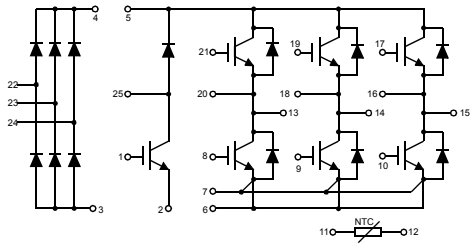
- AC & DC Motor Controls
- General Purpose Inverters
- Robotics
- Servo Controls

Description

Fairchild IGBT Power Module provides low conduction and switching losses as well as short circuit ruggedness. It's designed for the applications such as motor control and general inverters where short-circuit ruggedness is required.



Package Code : 25PM-AA



Internal Circuit Diagram

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Absolute Maximum Ratings T_C = 25°C unless otherwise noted

	Symbol	Description		FMS7G15US60	Units
Inverter & Brake	V_{CES}	Collector-Emitter Voltage		600	V
	V_{GES}	Gate-Emitter Voltage		± 20	V
	I_C	Collector Current	@ T_C = 80°C	15	A
	$I_{CM\ (1)}$	Pulsed Collector Current		30	A
	I_F	Diode Continuous Forward Current	@ T_C = 80°C	15	A
	I_{FM}	Diode Maximum Forward Current		30	A
	P_D	Maximum Power Dissipation	@ T_C = 25°C	73	W
	T_{SC}	Short Circuit Withstand Time	@ T_C = 100°C	10	μs
Converter	V_{RRM}	Repetitive Peak Reverse Voltage		1600	V
	I_O	Average Output Rectified Current		20	A
	I_{FSM}	Surge Forward Current @ 1Cycle at 60Hz, Peak value Non-Repetitive		200	A
	I^2t	Energy pulse @ 1Cycle at 60Hz		164	A^2s
Common	T_J	Operating Junction Temperature		-40 to +150	°C
	T_{STG}	Storage Temperature Range		-40 to +125	°C
	V_{ISO}	Isolation Voltage	@ AC 1minute	2500	V
Mounting Torque		Mounting part Screw	@ M4	2.0	N·m

Notes :

(1) Repetitive rating : Pulse width limited by max. junction temperature

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
FMS7G15US60	FMS7G15US60	25PM-AA	--	--	--

(2) TMC2 Relibility test was done under -45°C ~ 125°C