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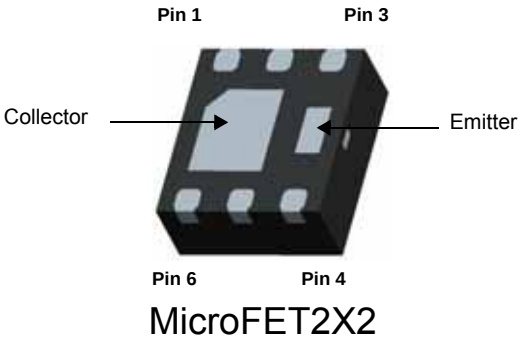
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

May 2014

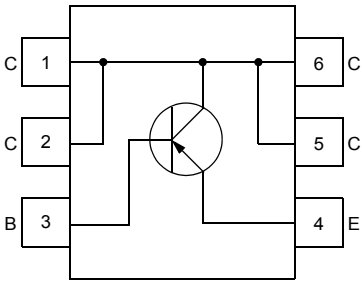
FJMA790
PNP Epitaxial Silicon Transistor

High current surface mount PNP silicon switching transistor for load management in portable applications

- High Collector current
- Low Collector-Emitter Saturation Voltage
- RoHS Compliant



MicroFET2X2



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter		Value	Units
V_{CBO}	Collector-Base Voltage		-50	V
V_{CEO}	Collector-Emitter Voltage		-35	V
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current (DC)		-2	A
P_D	Power Dissipation	Note1) Note2)	1.56 0.8	W W
T_J	Junction Temperature		150	°C
T_{STG}	Storage Temperature		-55 ~ 150	°C

Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter		Max.	Units
$R\Theta_{JA}$	Thermal Resistance, Junction to Ambient	Note1) Note2)	80 154	°C/W °C/W

Note1): The device mounted on a 1inch^2 pad of 2 oz copper pad on a 1.5 × 1.5 in. board of FR-4 material.

Note2): The device mounted on a minimum pad of 2 oz copper pad on a 1.5 × 1.5 in. board of FR-4 material

Electrical Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = -100μA, I_E = 0	-50			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = -10mA, I_B = 0	-35			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_C = -100μA, I_C = 0	-5			V
I_{CBO}	Collector Cut-off Current	V_{CB} = -35V, I_C = 0			-0.1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = -4V, I_C = 0			-0.1	μA
h_{FE}	DC Current Gain	V_{CE} = -1.5V, I_C = -1A V_{CE} = -1.5V, I_C = -1.5A V_{CE} = -3V, I_C = -2A V_{CE} = -2V, I_C = -500mA	100 100 100 100		400	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = -500mA, I_B = -5mA I_C = -1A, I_B = -10mA I_C = -2A, I_B = -50mA			-250 -350 -450	mV mV mV
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C = -1A, I_B = -10mA			-0.9	V
$V_{BE(on)}$	Base-Emitter On Voltage	V_{CE} = -2V, I_C = -1A			-0.9	V

Package Marking and Ordering Information

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
790	FJMA790	MLP 2×2 Single	7”	8mm	3,000 units

Typical Characteristics

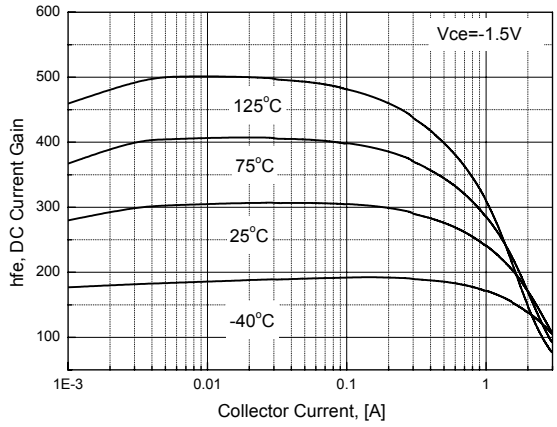


Figure 1. DC Current Gain, Vce=1.5V

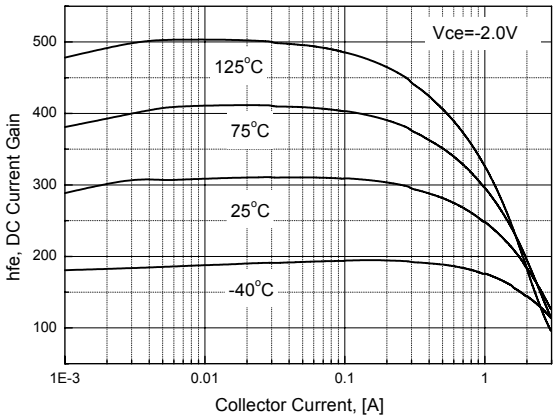


Figure 2. DC Current Gain, Vce=2V

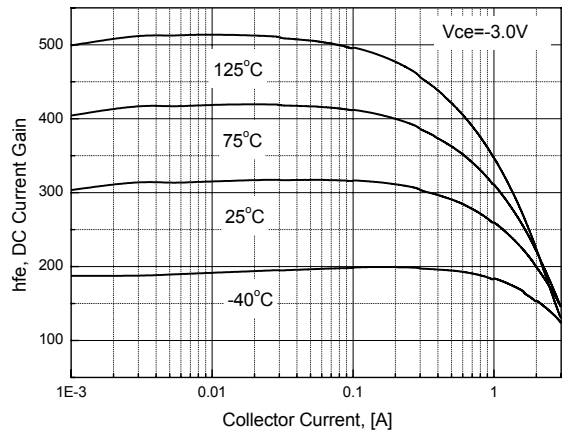


Figure 3. DC Current Gain,Vce=3V

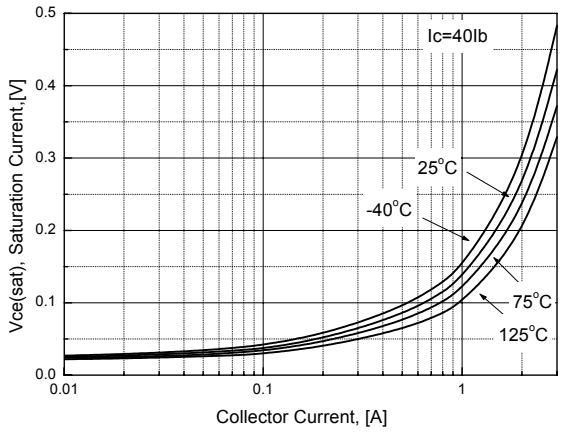


Figure 4. Collector-Emitter Satuation Voltage(1)

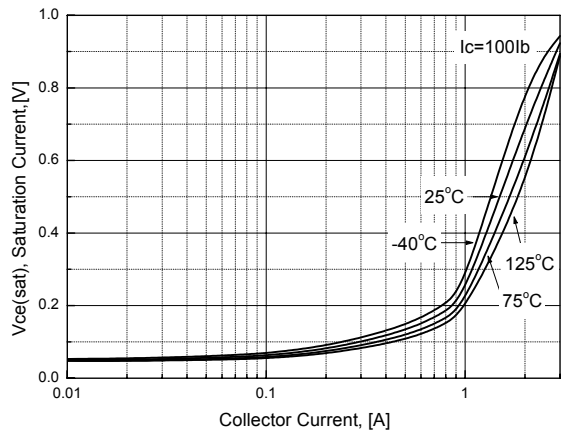


Figure 5. Collector-Emitter Satuation Voltage(2)

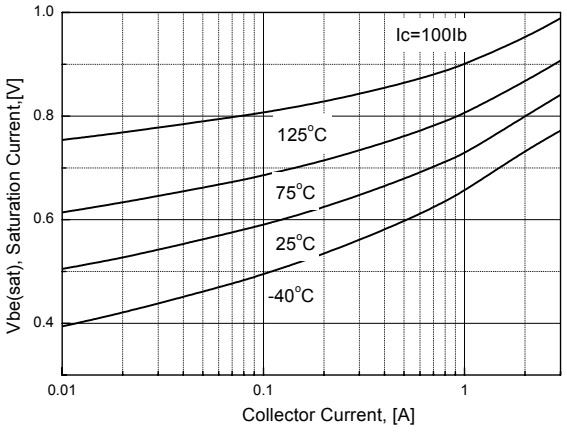


Figure 6. Base-Emitter Saturation Voltage

Typical Performance Characteristics (Continued)

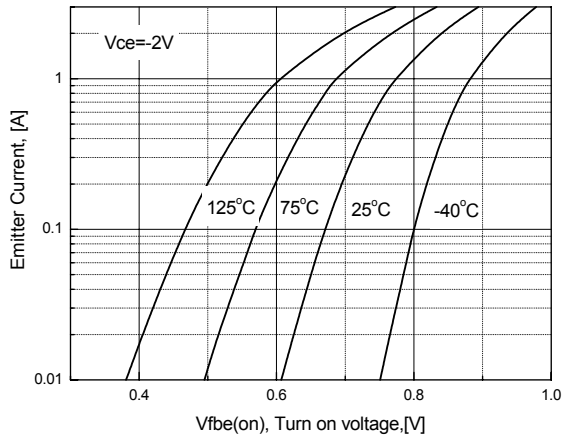


Figure 7. Base- Emitter Turn On Voltage

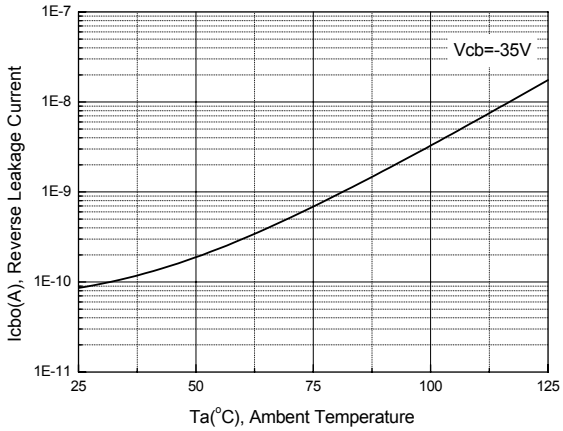


Figure 8. Collector-Base Leakage Current

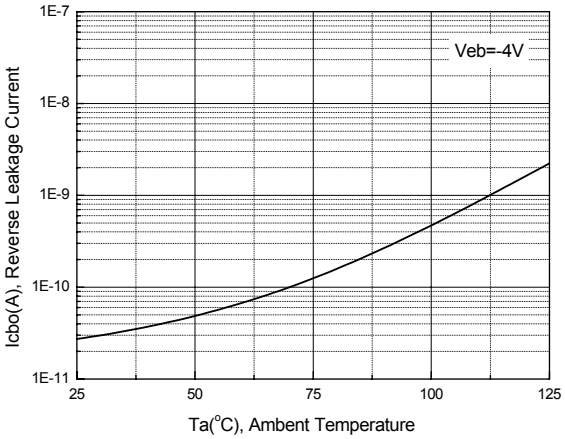


Figure 9. Base-Emitter Leakage Current

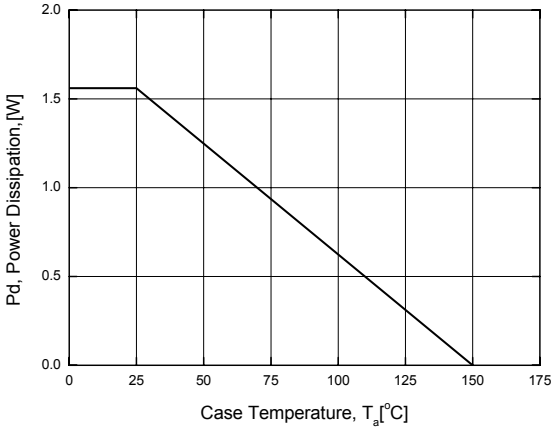


Figure 10. Power Derating

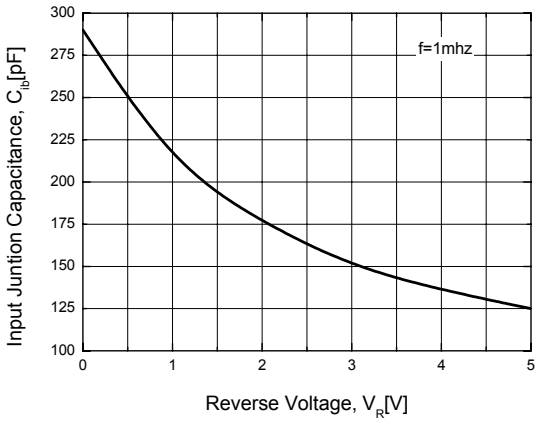


Figure 11. Input Capacitance

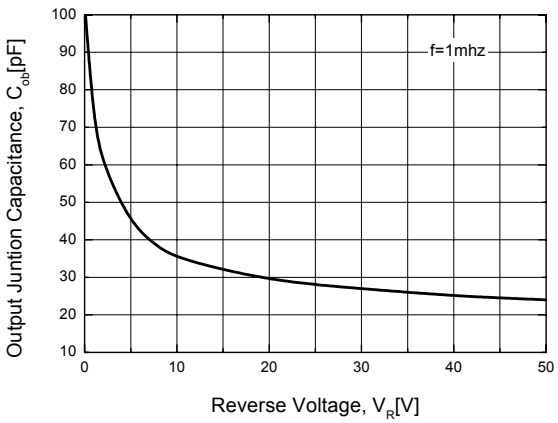
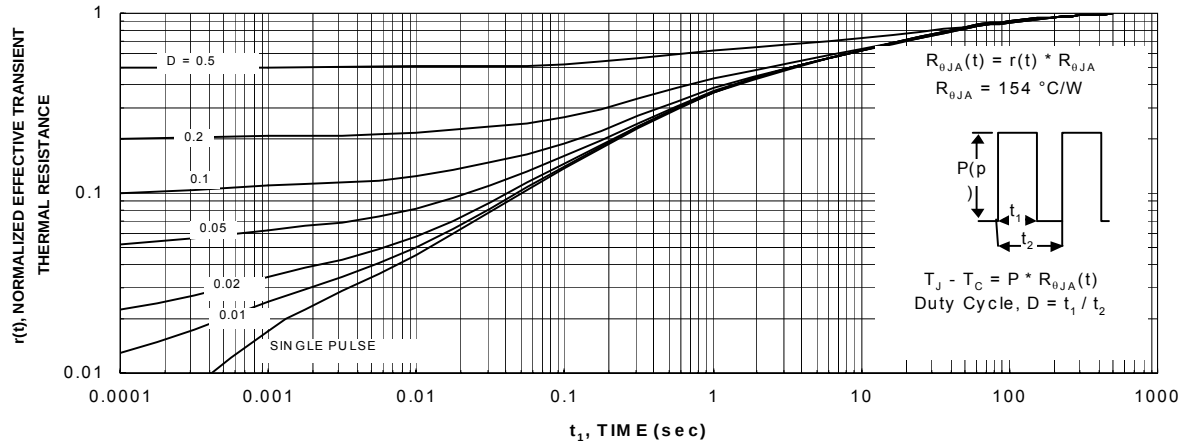
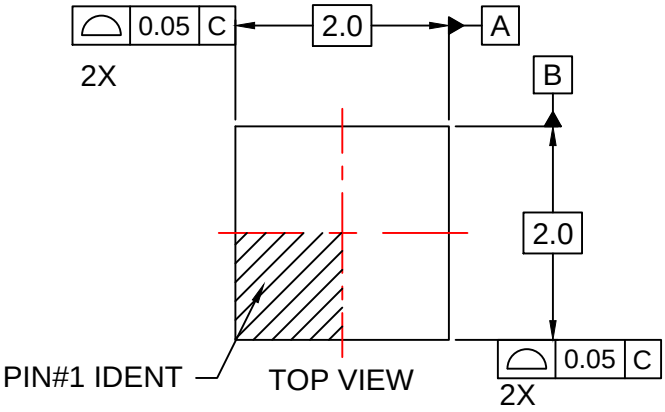


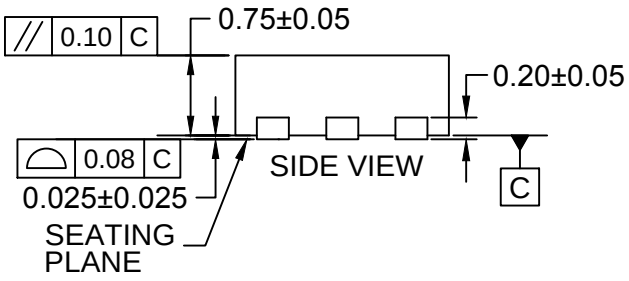
Figure 12. Output Capacitance

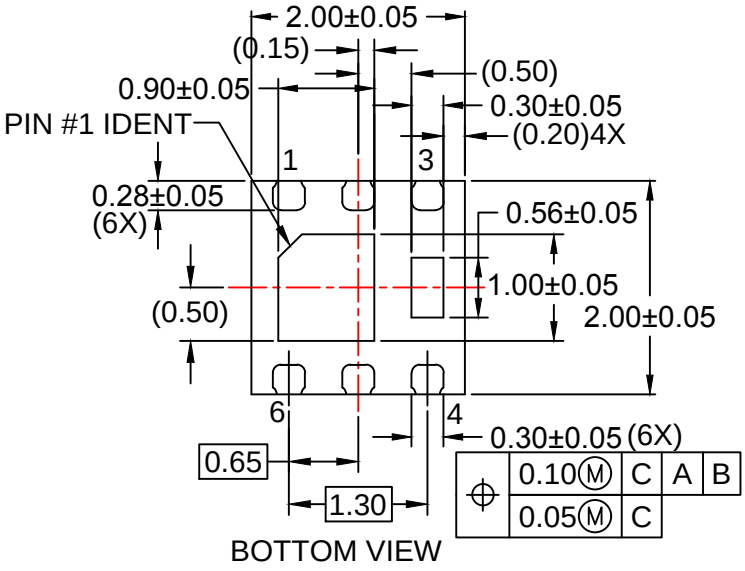
Typical Performance Characteristics (Continued)

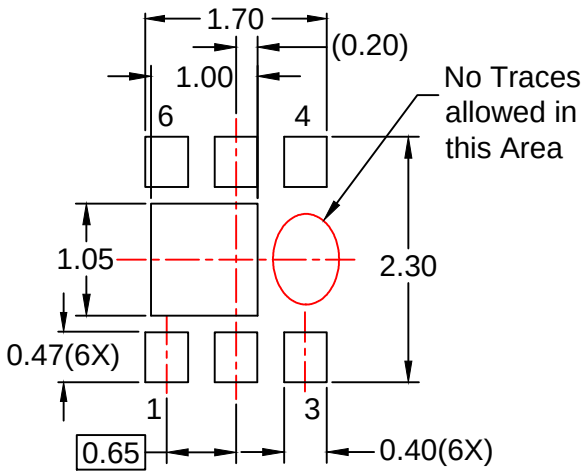
Figure 12. Transient Thermal Response

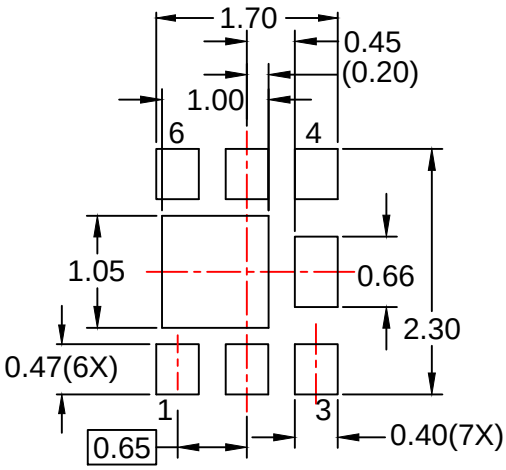












NOTES:

A. PACKAGE DOES NOT FULLY CONFORM TO JEDEC MO-229 REGISTRATION

B. DIMENSIONS ARE IN MILLIMETERS.

C. DIMENSIONS AND TOLERANCES PER ASME Y14.5M, 2009.

D. LAND PATTERN RECOMMENDATION IS EXISTING INDUSTRY LAND PATTERN.

E. DRAWING FILENAME: MKT-MLP06Lrev4.

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