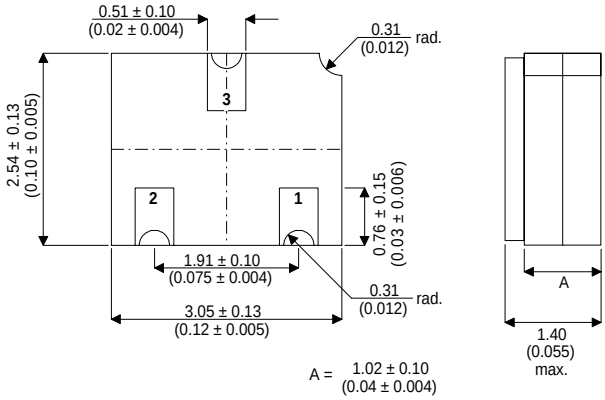
FMMT42CSM

MECHANICAL DATA
Dimensions in mm (inches)



SOT23 CERAMIC
(LCC1 PACKAGE)

Underside View

PAD 1 – Base PAD 2 – Emitter PAD 3 – Collector

GENERAL PURPOSE NPN TRANSISTOR IN A HERMETICALLY SEALED CERAMIC SURFACE MOUNT PACKAGE

FEATURES

- **GENERAL PURPOSE NPN TRANSISTOR**
- **HERMETIC CERAMIC SURFACE MOUNT PACKAGE**
- **CECC SCREENING OPTIONS**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage	300V
V_{CEO}	Collector – Emitter Voltage	300V
V_{EBO}	Emitter – Base Voltage	6V
I_C	Continuous Collector Current	500mA
P_{tot}	Power Dissipation @ T_{amb} = 25°C	429mW
	@ T_{case} = 25°C	1.8W
$T_j T_{stg}$	Operating and Storage Temperature	–55 to 175°C

THERMAL CHARACTERISTICS

Parameter		Max.	Unit
$R_{th(j-amb)}$	Thermal Resistance Junction to Ambient	350	°C/W

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Document Number 3587
Issue 1

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ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	I_C = 100µA	I_E = 0	300			V
$V_{(BR)CEO}$	Collector - Emitter Breakdown Voltage	I_C = 1mA	I_B = 0*	300			V
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_E = 100µA	I_C = 0	6			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 200V	I_E = 0			0.1	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 6V	I_C = 0			0.1	µA
		V_{EB} = 4V	I_C = 0			—	
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	I_C = 20mA	I_B = 2mA			0.5	V
$V_{BE(sat)}$	Emitter Saturation Voltage	I_C = 20mA	I_B = 2mA			0.9	
h_{FE}	Static Forward Current Transfer Ratio	I_C = 1mA	V_{CE} = 10V*	25			—
		I_C = 10mA	V_{CE} = 10V*	40			
		I_C = 30mA	V_{CE} = 10V*	40			
f_T	Transition Frequency	V_{CE} = 20V f = 20MHz	I_C = 10mA	50			MHz
C_{obo}	Output Capacitance	V_{CB} = 20V f = 1MHz	I_E = 0		6		pF

* Pulse Test: Pulse Width = 200µs, Duty Cycle ≤ 2%.