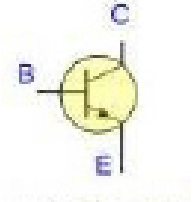
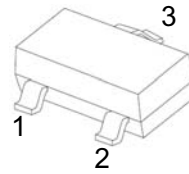


**NPN Plastic-Encapsulate Transistors**
**PRIMARY CHARACTERISTICS**

$V_{CEO}$	150V
$I_c$	1A
$V_{CE(sat)}$	0.3V
$h_{FE}$	100~300
$T_{J,Max}$	150°C

**FEATURES**

- Low  $V_{CE(sat)}$
- $h_{FE}$  characterised up to 1A for high current gain hold up
- For general amplification

**SCHEMATIC DIAGRAM**
**SOT-23 PACKAGE**


1. BASE
2. EMITTER
3. COLLECTOR

**MECHANICAL DATA**

- Case : Molded plastic, SOT-23
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

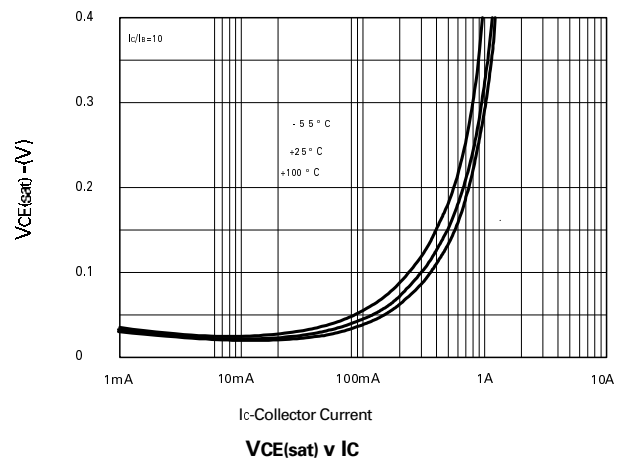
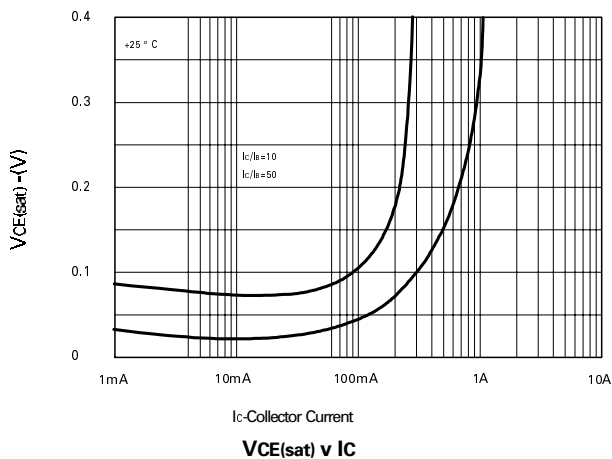
**MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$  unless otherwise noted)**

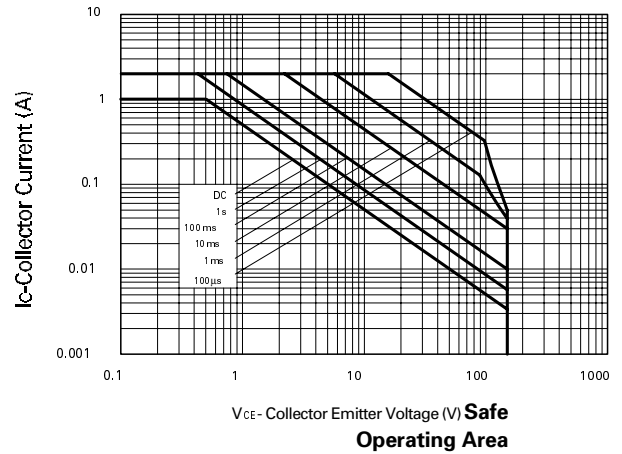
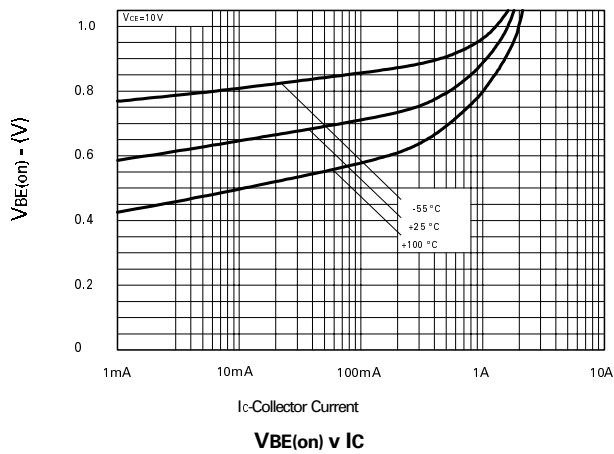
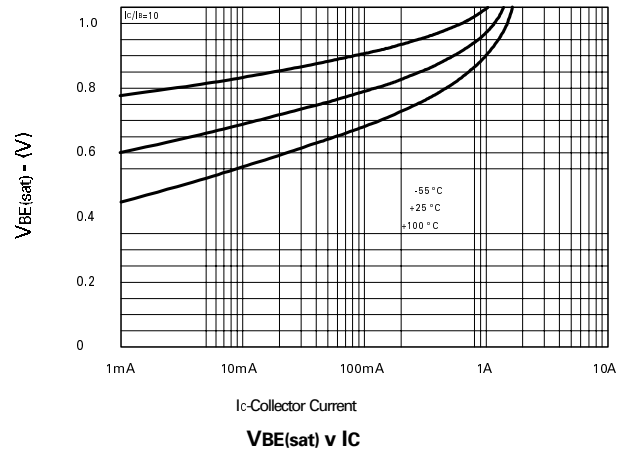
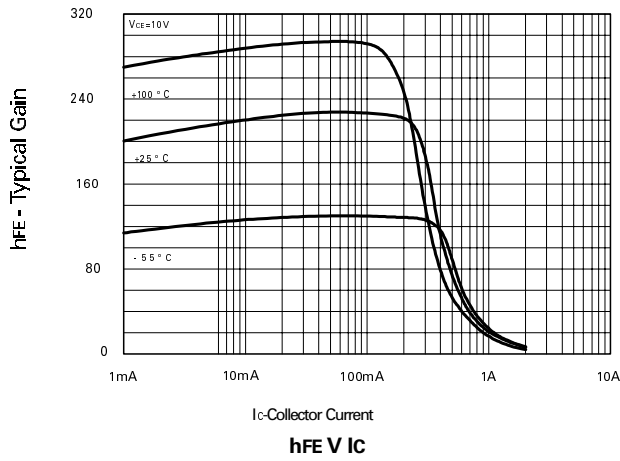
Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	170	V
$V_{CEO}$	Collector-Emitter Voltage	150	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_c$	Collector Current	1	A
$P_C$	Collector Power Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	500	°C/W
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =100μA, I <sub>E</sub> =0	170			V
V <sub>(BR)CEO</sub> *	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA, I <sub>B</sub> =0	150			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =100μA, I <sub>C</sub> =0	5			V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =150V, I <sub>E</sub> =0			0.1	μA
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =150V, V <sub>BE</sub> =0			0.1	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =4V, I <sub>C</sub> =0			0.1	μA
h <sub>FE(1)</sub> *	DC current gain	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA	100			
h <sub>FE(2)</sub> *		V <sub>CE</sub> =10V, I <sub>C</sub> =250mA	100		300	
h <sub>FE(3)</sub> *		V <sub>CE</sub> =10V, I <sub>C</sub> =500mA	50			
h <sub>FE(4)</sub> *		V <sub>CE</sub> =10V, I <sub>C</sub> =1A	10			
V <sub>CE(sat)(1)</sub> *	Collector-emitter saturation voltage	I <sub>C</sub> =250mA, I <sub>B</sub> =25mA			0.2	V
V <sub>CE(sat)(2)</sub> *		I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			0.3	V
V <sub>BE(on)</sub> *	Base-emitter turn-on voltage	V <sub>CE</sub> =10V, I <sub>C</sub> =500mA			1	V
V <sub>BE(sat)</sub> *	Base-emitter saturation voltage	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			1	V
f <sub>T</sub>	Transition frequency	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz				MHz
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			10	pF

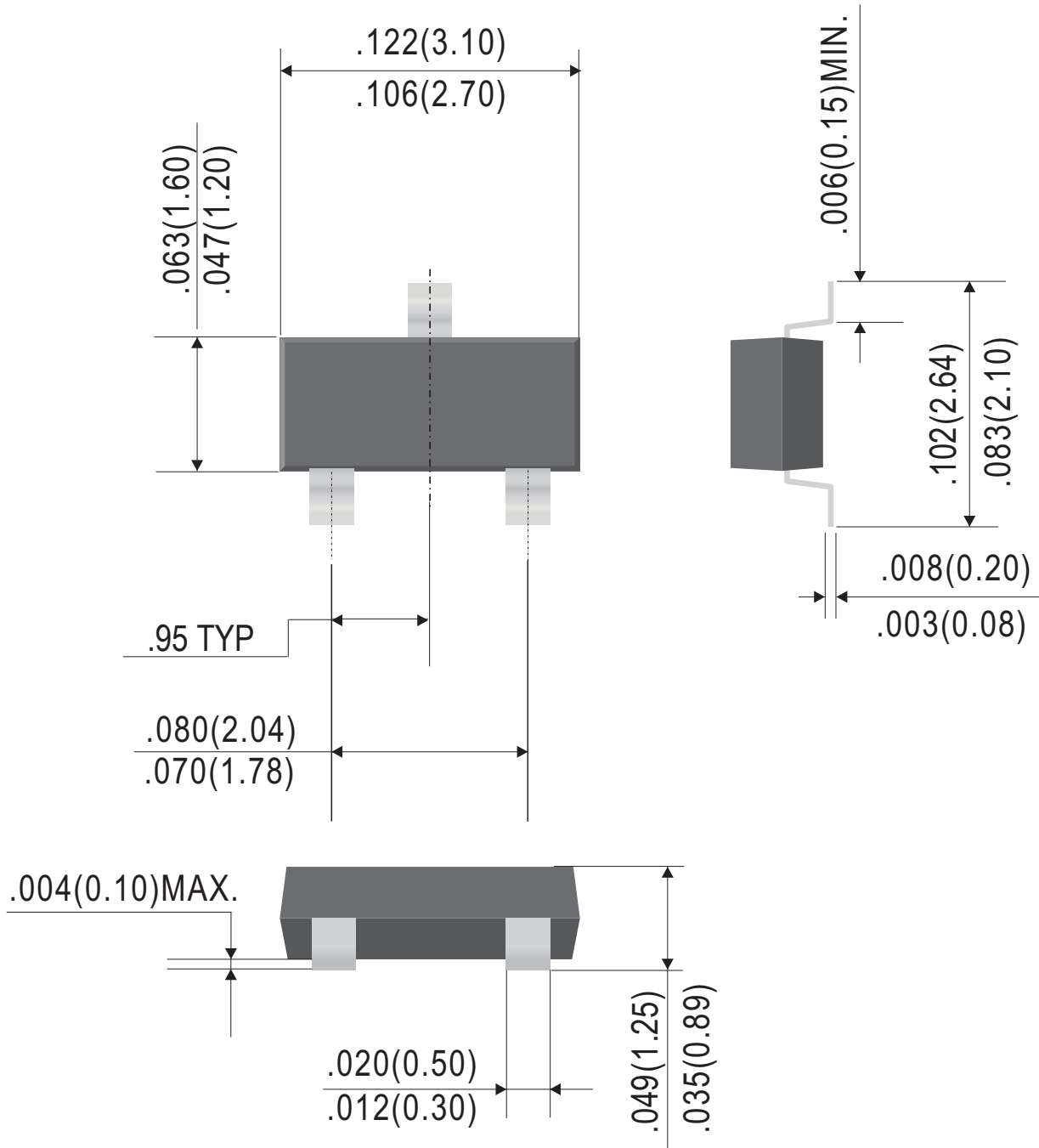
\*Pulse test: pulse width ≤300μs, duty cycle ≤ 2.0%.

**Typical Characteristics**


**Typical Characteristics**


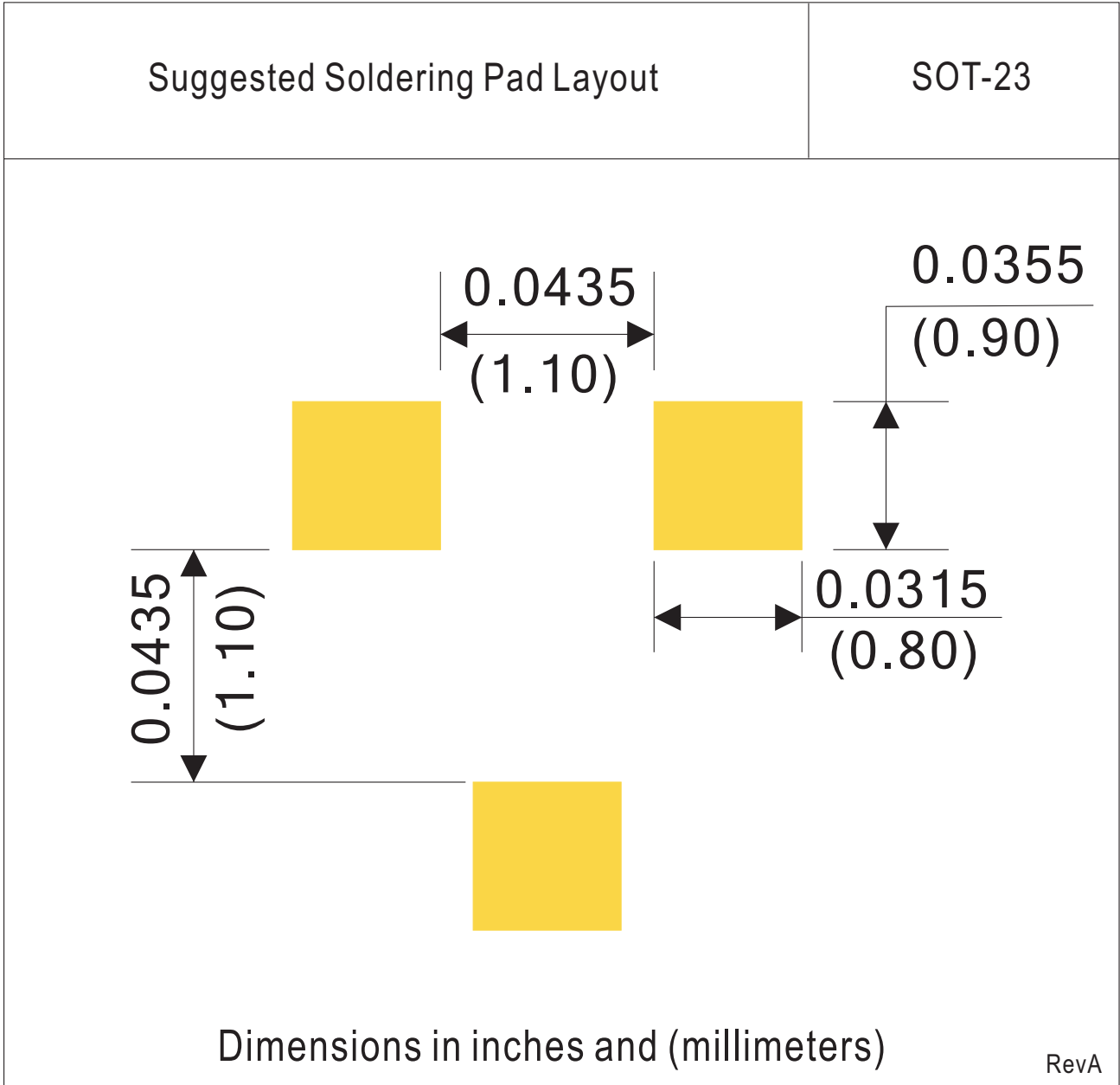
# Outline Drawing

# SOT-23



Dimensions in inches and (millimeters)

Rev.E



**Ordering Information:**

Device PN	Marking	Packing
FMMT495 -T <sup>(1)</sup> H <sup>(2)</sup> -WS <sup>(3)</sup>	495	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

(3) Willas brand abbreviation, Label Type does not display

**\*\*\*Disclaimer\*\*\***

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