

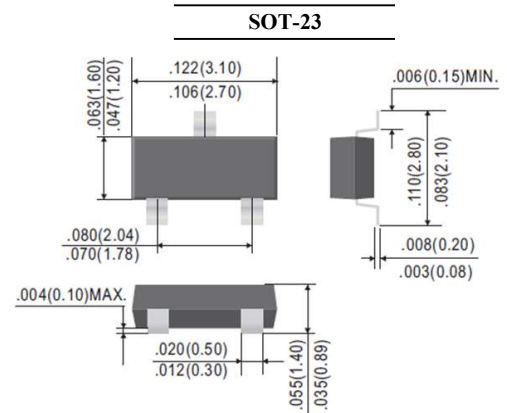
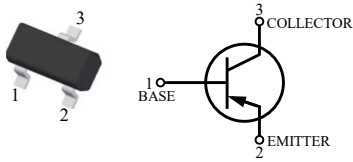


FMMT589H

PNP TRANSISTOR

FEATURES

- Suffix "H" indicates Halogen-free parts, ex. FMMT589H



Dimensions in inches and (millimeter)

Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-50	V
Collector Emitter Voltage	V_{CEO}	-30	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
Peak Pulse Current	I_{CM}	-2	A
Power Dissipation	P_D	310	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	403	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_{STG}	- 55 to + 150	$^\circ\text{C}$

Note :

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min.	Max.	Unit
DC Current Gain	$V_{CE} = -2\text{V}, I_C = -1\text{mA}$	h_{FE}	100	-	-
	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$		100	300	
	$V_{CE} = -2\text{V}, I_C = -1\text{A}$		80	-	
	$V_{CE} = -2\text{V}, I_C = -2\text{A}$		40	-	
Collector Base Cutoff Current	$V_{CB} = -30\text{V}$	I_{CBO}	-	-100	nA
Base Emitter Cutoff Current	$V_{CE} = -30\text{V}$	I_{CES}		-100	nA
Emitter Base Cutoff Current	$V_{EB} = -4\text{V}$	I_{EBO}	-	-100	nA
Collector Base Breakdown Voltage	$I_C = -100\mu\text{A}$	$V_{(BR)CBO}$	-50	-	V
Collector Emitter Breakdown Voltage	$I_C = -10\text{mA}$	$V_{(BR)CEO}$	-30	-	V
Emitter Base Breakdown Voltage	$I_E = -100\mu\text{A}$	$V_{(BR)EBO}$	-5	-	V
Collector Emitter Saturation Voltage	$I_C = -0.5\text{A}, I_B = -0.05\text{A}$	$V_{CE(sat)}$	-	0.25	V
	$I_C = -1\text{A}, I_B = -0.1\text{A}$		-	0.30	
	$I_C = -2\text{A}, I_B = -0.2\text{A}$		-	0.65	
Base Emitter Saturation Voltage	$I_C = -1\text{A}, I_B = -0.1\text{A}$	$V_{BE(sat)}$	-	1.2	V
Base Emitter Voltage	$I_C = -1\text{A}, V_{CE} = -2\text{V}$	V_{BE}	-	1.1	V
Transition Frequency	$I_C = -0.1\text{A}, V_{CE} = -5\text{V},$ $f = 100\text{MHz}$	f_T	100	-	MHz
Collector Capacitance	$f = 1\text{MHz}$	C_C	-	15	pF



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RATINGS AND CHARACTERISTIC CURVES

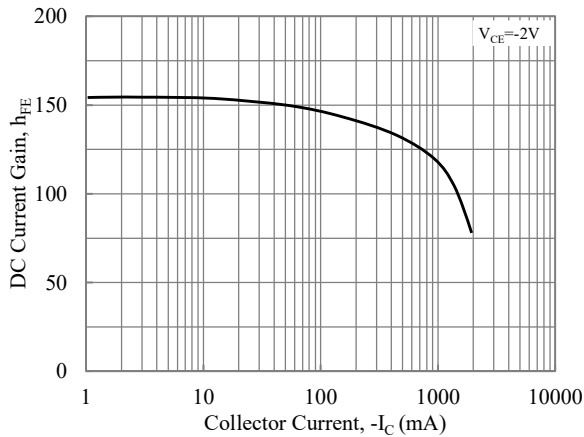


Fig. 1-Current Gain vs Collector Current

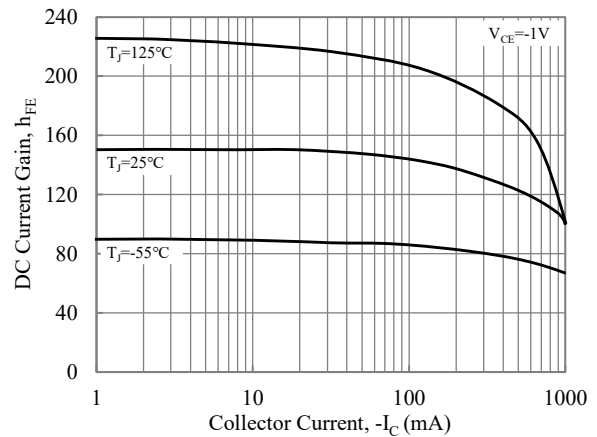


Fig. 2-Current Gain vs Collector Current

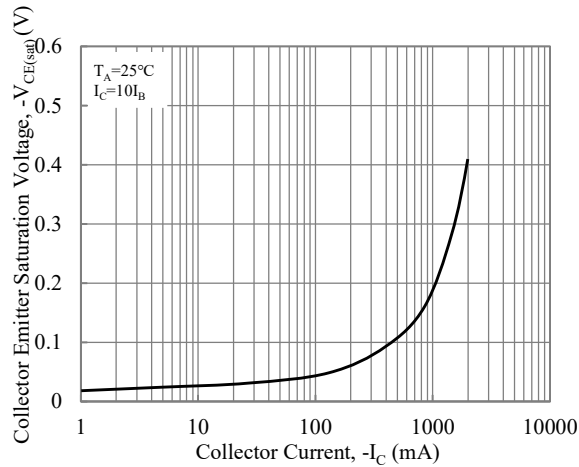


Fig. 3-Collector Emitter Saturation Voltage vs. Collector Current

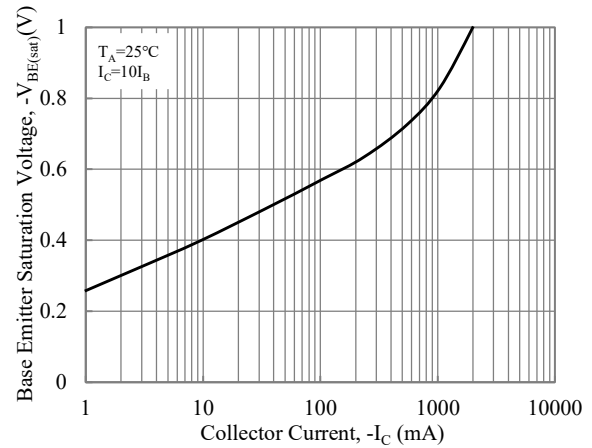


Fig. 4-Base Emitter Saturation Voltage vs. Collector Current

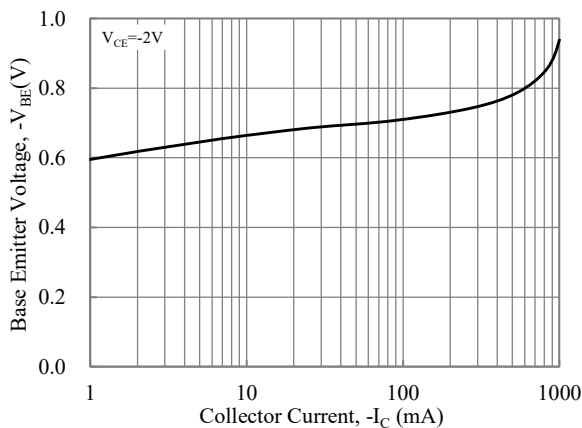


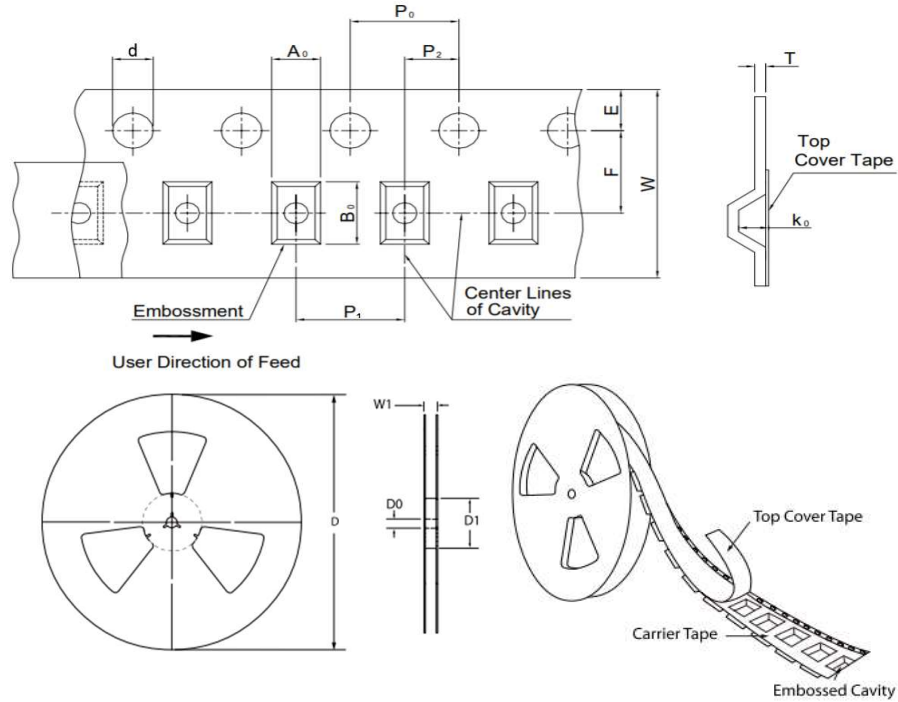
Fig. 5-Base Emitter Voltage vs. Collector Current



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TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A_0	3.30 ± 0.10
Carrier length	B_0	3.00 ± 0.10
Carrier depth	K_0	1.70 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D_0	13.00 ± 0.50
Reel inner diameter	D_1	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P_0	4.00 ± 0.10
Punch hole pitch	P_1	4.00 ± 0.10
Embossment center	P_2	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W_1	MAX. 14.50

ORDER INFORMATION

Package	Reel Size	Quantity
SOT-23	7"	3,000

MARKING CODE

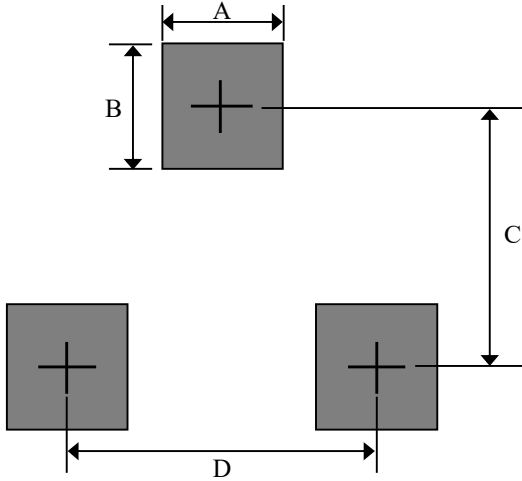
Part Number	Marking Code
FMMT589H	TS



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PNP TRANSISTOR

SUGGESTED SOLDER PAD LAYOUT



Unit : mm

PACKAGE	A	B	C	D
SOT-23	0.80	1.00	2.40	1.90