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Fairchild Semiconductor KST4125MTF

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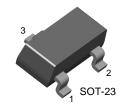






## **KST4125**

### **General Purpose Transistor**



1. Base 2. Emitter 3. Collector

# **PNP Epitaxial Silicon Transistor**

# **Absolute Maximum Ratings** $T_a$ =25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	-30	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-30	V
V <sub>EBO</sub>	Emitter-Base Voltage	-4	V
I <sub>C</sub>	Collector Current	-200	mA
P <sub>C</sub>	Collector Power Dissipation	350	mW
T <sub>STG</sub>	Storage Temperature	150	°C

Refer to KST3906 for graphs

# **Electrical Characteristics** $T_a$ =25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	$I_{C}=-10\mu A, I_{E}=0$	-30		V
BV <sub>CEO</sub>	* Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -1mA, I <sub>E</sub> =0	-30		V
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = -10μA, I <sub>C</sub> =0	-4		V
I <sub>CBO</sub>	Collector Cut-off Current	V <sub>CB</sub> = -20V, I <sub>E</sub> =0		-50	nA
I <sub>EBO</sub>	Emitter Cut-off Current	V <sub>EB</sub> = -3V, I <sub>C</sub> =0		-50	nA
h <sub>FE</sub>	* DC Current Gain	V <sub>CE</sub> = -1V, I <sub>C</sub> = -2.0mA	50	150	
		$V_{CE}$ = -1V, $I_{C}$ = -50mA	25		
V <sub>CE</sub> (sat)	* Collector-Emitter Saturation Voltage	I <sub>C</sub> = -50mA, I <sub>B</sub> = -5.0mA		-0.4	V
V <sub>BE</sub> (sat)	* Base-Emitter Saturation Voltage	I <sub>C</sub> = -50mA, I <sub>B</sub> = -5.0mA		-0.95	V
f <sub>T</sub>	Current Gain Bandwidth Product	I <sub>C</sub> = -10mA, V <sub>CE</sub> = -20V f=100MHz	200		MHz
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> = -5V, I <sub>E</sub> =0, f=100KHz		4.5	pF
NF	Noise Figure	$I_C$ = -100μA, $V_{CE}$ = -5V $R_S$ =1K $\Omega$ f=10Hz to 15.7KHz		5	dB

<sup>\*</sup> Pulse Test: PW≤300μs, Duty Cycle≤2%





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# **Package Dimensions SOT-23** 0.20 MIN 0.45~0.60 0.40 ±0.03 1.30 ±0.10 $2.40 \pm 0.10$ 0.03~0.10 0.38 REF 0.40 ±0.03 $0.12^{\,+0.05}_{\,-0.023}$ 0.96~1.14 2.90 ±0.10 0.97REF 0.95 ±0.03 | 0.95 ±0.03 0.508REF 1.90 ±0.03

**Dimensions in Millimeters** 

# **Distributor of Fairchild Semiconductor: Excellent Integrated System Limited**Datasheet of KST4125MTF - TRANS PNP 30V 0.2A SOT-23

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	CoolFET™	FASTr™	MicroFET™	PowerTrench <sup>®</sup>	SuperSOT™-6
	CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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	EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
	E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
	EnSigna™	I <sup>2</sup> C™	$OCX^{TM}$	RapidConfigure™	UHC™
	Across the board.	Around the world.™	OCXPro™	RapidConnect™	UltraFET <sup>®</sup>
	The Power Franci	hise™	OPTOLOGIC <sup>®</sup>	SILENT SWITCHER®	$VCX^{TM}$
Programmable Active Droop™		OPTOPLANAR™	SMART START™		

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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