



Micro Commercial Components



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MMBT589

PNP Silicon Plastic-Encapsulate Transistor

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Thermal Resistance, junction to Ambient: 403 °C/W
- Marking: 589

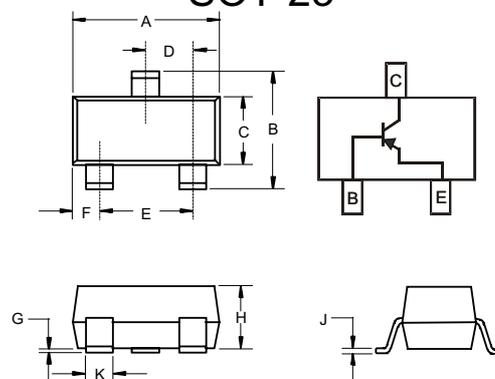
Maximum Ratings

Symbol	Rating	Rating	Unit
V _{CEO}	Collector-Emitter Voltage	-30	V
V _{CBO}	Collector-Base Voltage	-50	V
V _{EBO}	Emitter-Base Voltage	-5.0	V
I _C	Collector Current, Continuous	-1.0	A
P _D	Power Dissipation	310	mW
T _J	Operating Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

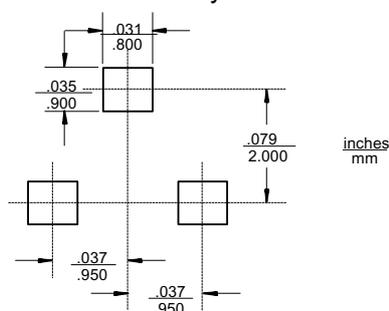
Symbol	Parameter	Min	Max	Units
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage* (I _C =-10.0mA, I _B =0)	-30		Vdc
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =-100μA, I _E =0)	-50		Vdc
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _E =-100μA, I _C =0)	-5.0		Vdc
I _{CBO}	Collector cut-off Current (V _{CB} =-30Vdc, I _E =0)		-0.1	uAdc
I _{CES}	Collector Emitter Cut-off Current (V _{CES} =-30Vdc,)		-0.1	uAdc
I _{EBO}	Emitter cut-off Current (V _{EB} =-4Vdc, I _C =0)		-0.1	uAdc
h _{FE}	DC Current Gain* (I _C =-1mA, V _{CE} =-2.0Vdc) (I _C =-500mA, V _{CE} =-2.0Vdc) (I _C =-1000mA, V _{CE} =-2.0Vdc) (I _C =-2000mA, V _{CE} =-2.0Vdc)	100 100 80 40	300	
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =-500mA, I _B =-50mA) (I _C =-1000mA, I _B =-100mA) (I _C =-2000mA, I _B =-200mA)		-0.25 -0.4 -0.65	Vdc
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =-1000mA, I _B =-100mA)		-1.2	Vdc
V _{BE(on)}	Base-Emitter Turn-on Voltage (I _C =-1000mA, V _{CE} =-2Vdc)		-1.1	Vdc
f _T	Transition frequency (I _C =-100mA, V _{CE} =-5Vdc, f=100MHz)	100		MHz
C _{ob}	Collector Output Capacitance (f=1.0MHz)		15	pF

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout





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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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