



Micro Commercial Components



Micro Commercial Components
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MMBT945-L MMBT945-H

Features

- Capable of 0.2Watts of Power Dissipation.
- Collector-current 0.15A
- Collector-base Voltage 60V
- Operating and storage junction temperature range: -55°C to +150°C
- 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
- Marking: CR•

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=1mA_{dc}, I_B=0$)	50		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=100\mu A_{dc}, I_E=0$)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=100\mu A_{dc}, I_C=0$)	5.0		Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=60V_{dc}, I_E=0A_{dc}$)		0.1	μA_{dc}
I_{CER}	Collector Cutoff Current ($V_{CE}=55V_{dc}, R=10M\ \Omega$)		0.1	μA_{dc}
I_{EBO}	Emitter Cutoff Current ($V_{EB}=5.0V_{dc}, I_C=0A_{dc}$)		0.1	μA_{dc}

ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain ($I_C=1.0mA_{dc}, V_{CE}=6.0V_{dc}$)	130	400	
$h_{FE(2)}$	DC Current Gain ($I_C=0.1mA_{dc}, V_{CE}=6.0V_{dc}$)	40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=100mA_{dc}, I_B=10mA_{dc}$)		0.3	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=100mA_{dc}, I_B=10mA_{dc}$)		1.0	Vdc
C_{ob}	Collector output capacitance ($V_{CB}=10V, I_E=0, f=1MHz$)		3.0	pF

SMALL-SIGNAL CHARACTERISTICS

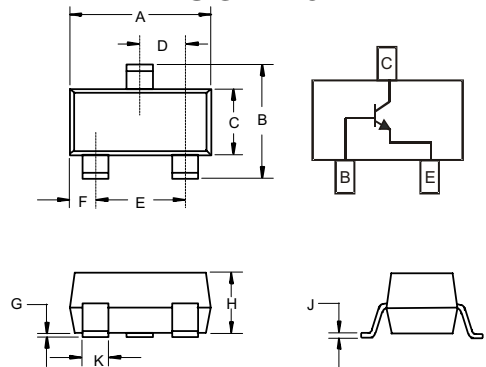
f_T	Transistor Frequency ($I_C=10mA_{dc}, V_{CE}=6.0V_{dc}, f=30MHz$)	150		MHz
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CLASSIFICATION OF h_{FE}

Rank	L	H
Range	130-200	200-400

NPN Silicon Plastic-Encapsulate Transistor

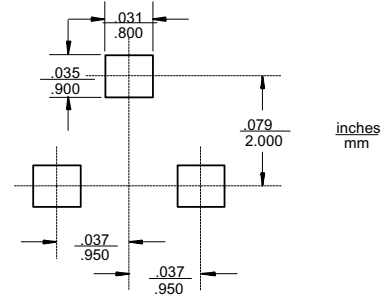
SOT-23



DIMENSIONS

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

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